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**ELECTROLYTIC ZINC COMPANY OF
AUSTRALASIA LIMITED
MINERAL RESOURCES DIVISION**

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Admin Officer	
LETTER	
DATED	
6. 11. 87	
REFERS	

E.L. 22/85 - SAVAGE RIVER

**ANNUAL REPORT ON EXPLORATION ACTIVITY
AUGUST, 1986 TO AUGUST, 1987**

MICROFILMED

E.Z. REPORT NO. T227

**IAN J. MATHISON,
N. FERGUSON,
SEPTEMBER, 1987**

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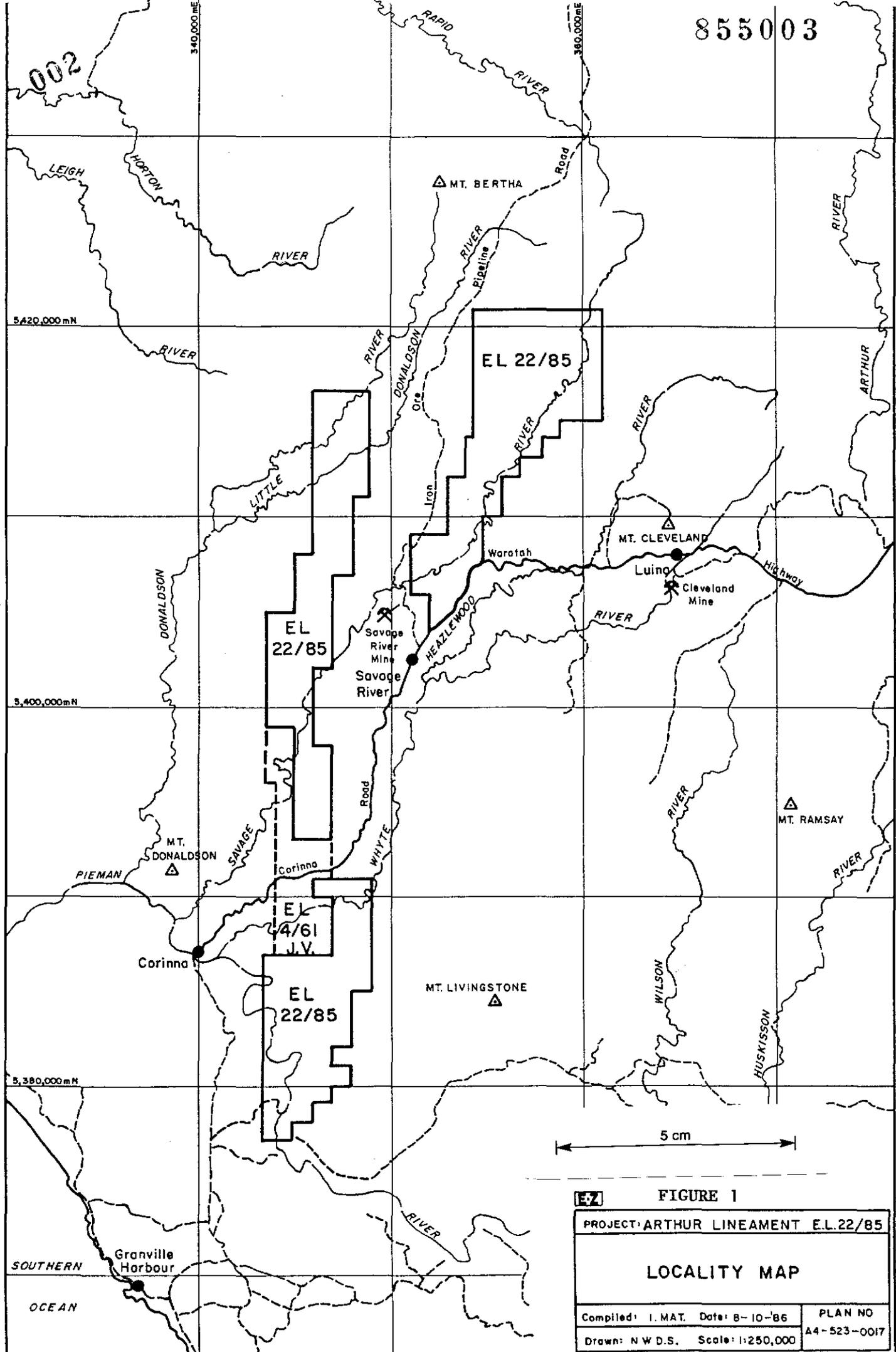


FIGURE 1
 PROJECT ARTHUR LINEAMENT E.L.22/85
LOCALITY MAP
 Compiled: I. MAT. Date: 8-10-86 PLAN NO
 Drawn: N.W.D.S. Scale: 1:250,000 A4-523-0017

1. INTRODUCTION

1.1. Location, Title and Access (Figs 1, 2 & 3)

E.L. 22/85 of a total of 177 km² was granted to E.Z. on 20th November, 1985. The E.L. consists of three blocks; the Lucy Creek Block, the Badger Plains Block and the Bronzite Hill Block (Fig. 1).

The Lucy Creek Block (41 sq.km.) extends north-eastwards from the Reece Dam on the Pieman River to just south of the Corinna Road. 6sq.km. of the block in the south is land vested in the H.E.C. whilst a strip 800 metres wide, along the Pieman River forms the Pieman River State Reserve. This 7sq.km. is excluded from the E.L. (Fig. 2).

The northern part of the grid is accessible from the Corinna road and the western part by dinghy along the Pieman River. Dennis' Track provides access to the southern areas whilst a 4WD track over Whaleback Ridge provides access to a portion of the eastern side (see Figure 2).

The Lucy Creek Block has seen the main thrust of E.Z.'s exploration on E.L. 22/85 during 1986-87.

Eleven cut grid lines running east-west, two base lines running north-south together with numerous rivers and streams cutting the grid provide ample access to outcrop and sufficient geological cover (see Figure 3).

1.2. Previous Exploration and Mining

Exploration and mining commenced in the district about the early 1880's, with alluvial gold being sought in creeks draining into the Savage River.

The Lucy Creek Block has numerous old workings, represented by small to medium face cuts, adits and shafts distributed widely over the grid. Gold and copper appear to have been the main targets for exploration. Montgomery (1894) reported two companies working for alluvial gold in the areas of Lucy and Nancy Spurs.

More recently, Savage Resources (formerly I.M.I.) and Comstaff have carried out investigations in areas of the current E.L. 22/85. Mathison (1986 E.Z. Report No. T220) completed a literature review on the Corinna-Savage River gold fields. All major alluvial and hard rock gold mineralisation were located on a 1:50,000 scale geological map. A list of literature on the Corinna-Savage River area is contained in the Appendix.

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340,000m.E.

350,000m.E.

5 cm

5,400,000m.N.

The Longback

Mount Meredith

Mount Donaldson

Blackguards Hill

5,390,000m.N.

CORINNA

WHYTE

ROCKY RIVER

PIEMAN RIVER

NANCY CREEK

LUCY

PARADISE

PARADISE

RIVER

E.L. 22/85

RESERVE

OWEN

MEREDITH

CREEK

RIVER

5,380,000m.N.

HEMSKIRK

ROAD

PIEMAN

ROAD

E-2

FIGURE 2

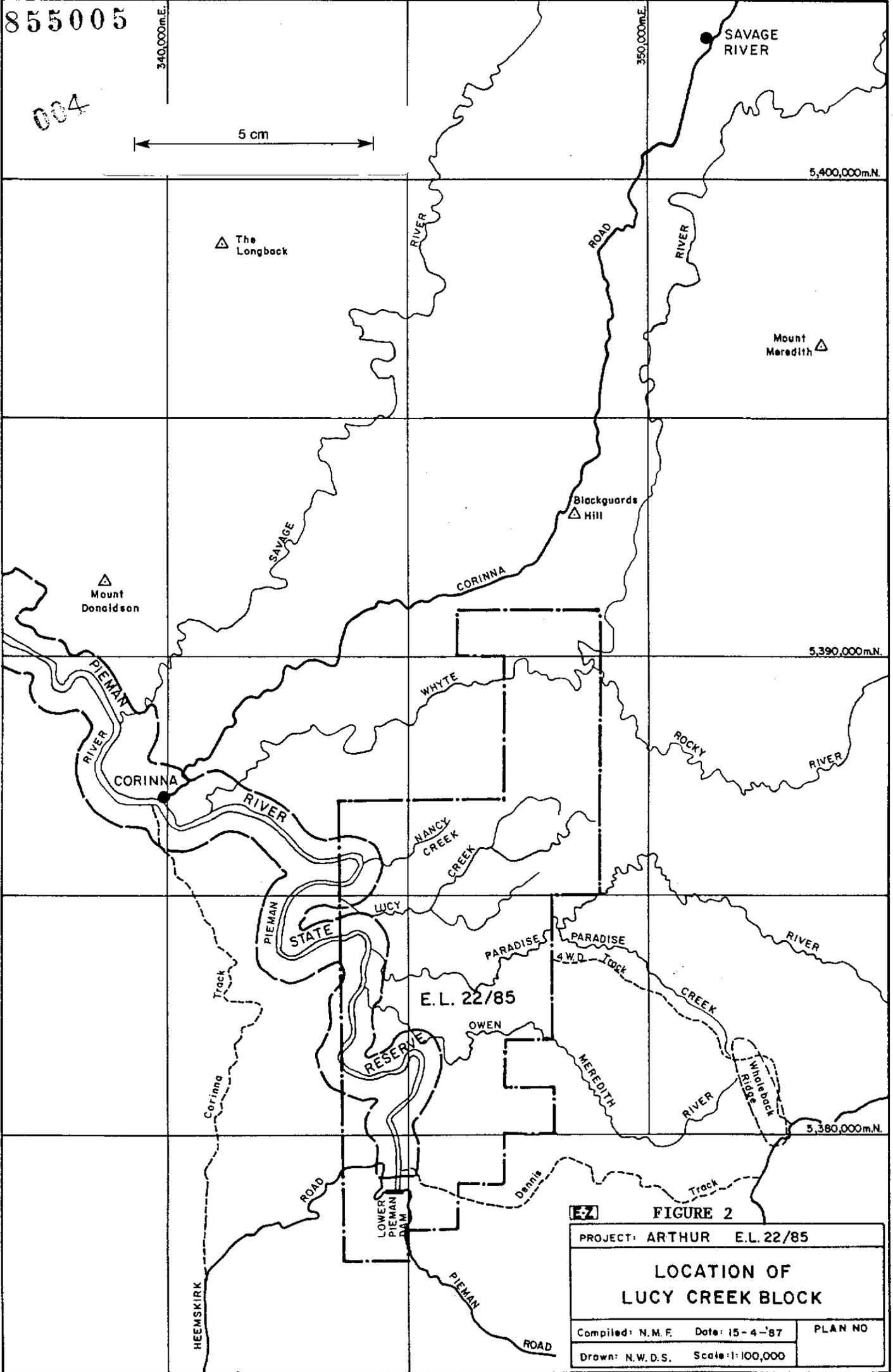
PROJECT: ARTHUR E.L. 22/85

LOCATION OF LUCY CREEK BLOCK

Compiled: N.M.F. Date: 15-4-87

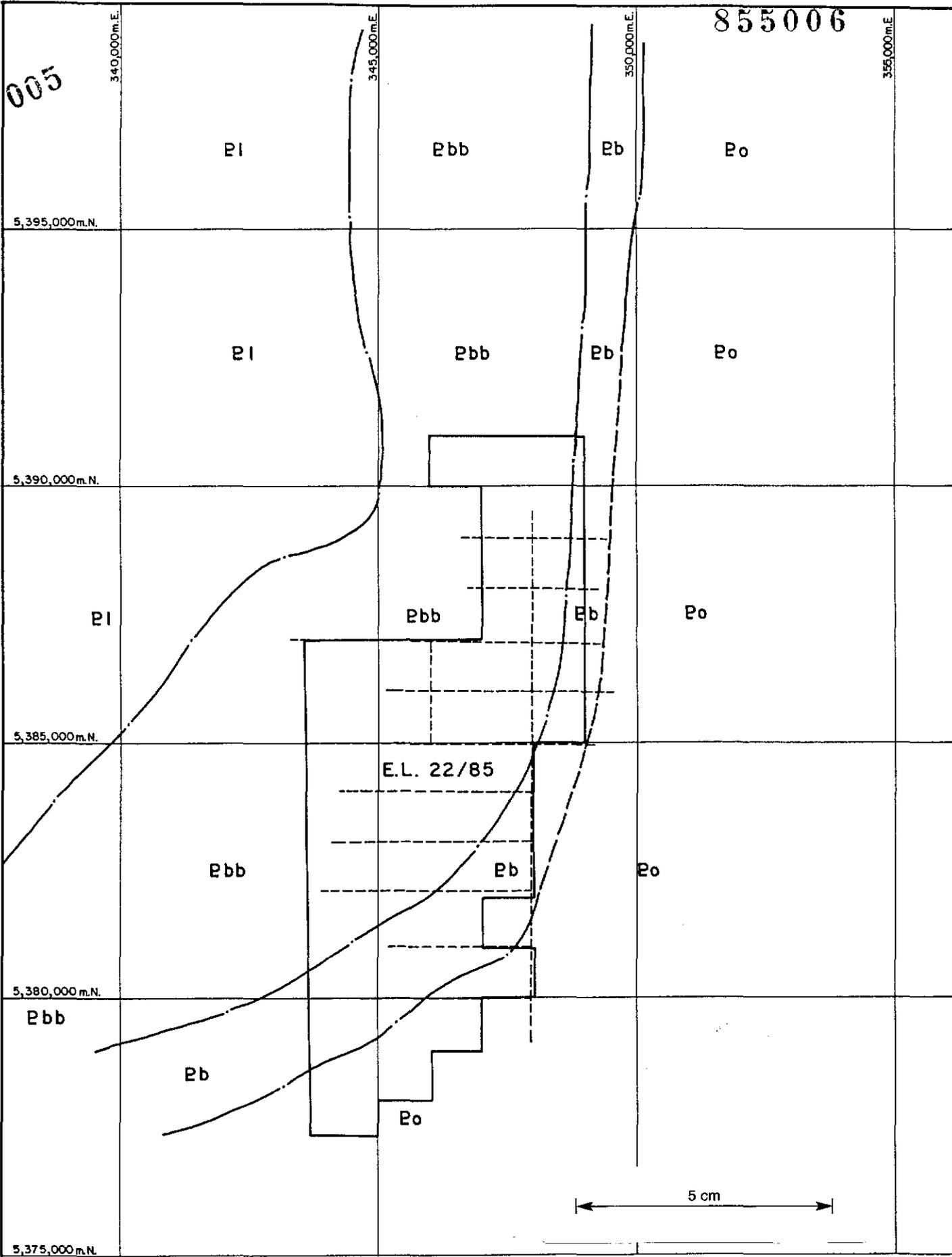
PLAN NO

Drawn: N.W.D.S. Scale: 1:100,000



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LEGEND

- Pbb - Batty Bend Formation.
- Pb - Bowry Member.
- Po - Oonah Formation.
- P1 - Longback Formation.
- Geological Contact.
- E.L. Boundary.
- - - - - Cut Grid Lines.

Lucy Creek Block Figure 3

PROJECT: ARTHUR E.L. 22/85

CUT GRID LOCATION & INTERPRETIVE GEOLOGY

Compiled: N.M.F. Date: 18-4-'87

PLAN No.

Drawn: NWDS Scale: 1:100,000

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1.3. Mineralization

Known mineralization in the area has been summarized by Mathison (1986). It is mainly confined to the Bowry Member of the Battys Bend Formation or within sediments of the Oonah Formation just above the contact with the Bowry Member.

Bedrock mineralization within the Bowry Member is listed below:

- Rocky River Mine - magnetite with Cu and Au.
- Savage River Magnetite deposit.
- Specimen Hill Au deposits.

Mineralization within the Oonah Formation overlying the Bowry Member occurs at:

- Cape Copper - Cu+Au+Ag deposit (in Nine Mile Creek)
- Golden Ridge - Auriferous quartz veins.

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2. WORK COMPLETED TO 31ST AUGUST, 1987

2.1. Gridding

A 1km spaced grid, with connecting walking tracks and base lines, has been cut and pegged at 20m slope corrected intervals.

2.1. Exploration Techniques

Exploration of E.L. 22/85 in 1986-87 was of a first phase nature entailing regional geological mapping, rock chip, stream sediment and panned concentrate sampling over 11 cut grid lines, two cut base lines, several creeks and rivers and some walking tracks. Several lines were covered by a partially completed ground magnetics survey.

2.3. Sample Preparation & Analytical Technique

All geological analyses were carried out by Analabs, Burnie.

Rock samples were dried, crushed, disced to 1mm, split and pulverized. For A.A.S. a total digestion by mixed acid attack was used (Analabs method 103). As and Sb, when requested, were determined by Vapour Hydride generation and Vapour Hydride generation after ammonium chloride sublimation (Analabs methods 114 and 117 respectively). Au was determined by fire assay and A.A.S. determination (Method 309).

Stream sediment samples were sieved to -80# and then analysed using the same techniques used for rock samples. Panned concentrates were subjected to T.B.E. separation and the heavy mineral fractions were assayed for gold only using a fire assay - A.A.S. technique (Method 309).

2.4. Geological Mapping

Preliminary regional mapping during 1986-87, has produced much data which allows the definition of several units on the grid. The grid has been mapped and sampled, not including the mapping of rivers and creeks.

Grid lines were mapped at 1:2,000 scale with samples being taken, on average, every 80-100m or wherever a significant change in rock type occurs.

Rock chip sample ledgers for all samples taken from the Lucy Creek Grid have been completed including binocular microscope petrographic descriptions of individual samples and geochemical data (see Appendix 1).

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2.5. Geochemistry

270 rock chip, 30 stream sediment and 29 panned concentrate samples have been taken from the Lucy Creek block.

All samples were analysed for Cu, Pb, Zn, Fe, Mn, Cr, Ni and in addition some were analysed for Ag, Co, Bi, As, Sb. Analabs analytical reports are listed in Appendix 1 & 2.

Sample locations were plotted on base maps. These were digitized using Surpac and stored for computer plotting.

2.6. Petrology

A suite of 35 representative rock samples of low grade regional metamorphic facies were submitted to Central Mineralogical Services (Adelaide) for thin section petrology.

Petrology reports are contained in Appendix 3.

2.7. Geophysics - Ground magnetics

A limited ground magnetics survey, using Scintrex MP3 system, was conducted over five of the cut grid lines. Results were corrected for diurnal variation using a local base station and stored on hard disc on the Prime computer for plotting by Surpac.

2.8. Microprobe Research

A tourmaline rich sample was probed using the University of Tasmania's microprobe to determine whether or not the tourmaline composition would be valuable in finding mineralization. A report was prepared (Appendix 4).

2.9. Draughting and Digitizing

Base plans for the grid have been draughted and digitized using the Prime system and plotted by Surpac. All major unnamed creeks were named for easy location. All geochemical data has been inputted and stored on hard disc using the Prime system. However due to the unexpected complexity of exploration draughting, all plots were eventually prepared by a competent draughtsman.

2.10. Alluvial Gold Assessment

The potential for alluvial gold within elevated Tertiary gravels was investigated. The results of mapping and sampling by Montgomery (1894) were used in conjunction with airphoto interpretation. Old workings were located and sampled.

3. RESULTS RECEIVED

3.1. Geochemistry

2.1.1. Rock Chip Sampling (Appendix 1, Plans 1 & 2)

Rock chip samples were taken at selected intervals (on average 80-100m) or wherever a significant change in rock type occurred. Background geochemical values were determined by simple mathematical manipulation and are tabled below.

Element	Mean Value (ppm)
Cu	82.5
Pb	30.5
Zn	84.1
Au	0.009*
Mn	404.0
Fe	5.9%

* Too many samples, particularly for Au, were below the detection limit for mean values to be of any great significance.

Anomalous values were determined by comparing the results with these mean values (tabled above) and those averaged values presented by Levinson (1974) tabled below.

Element	Av. (ppm)	Mafic Rocks	Sedimentary Rocks (ppm)*
Cu	55	100	50 - 150
Pb	13	5	20 - 70
Zn	70	100	100 - 1000
Au	0.004	0.004	0.004

* Sedimentary Rocks = shales to black shales.

Geochemical analyses for rock chip samples are plotted on Plans 3 to 10.

Background values for Cu-Pb-Zn and Au from rocks on the Lucy Creek Block tend to be similar to those averaged figures presented by Levinson (1974). Zinc and gold values are different, with zinc being slightly lower and gold being higher than Levinson's values.

Most of the anomalous values reported from the grid are associated with either high Fe and/or Mn values.

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Anomalous Copper (Fig. 4)

Eight Cu anomalies were reported from the Lucy Creek Block with anomalous values ranging from 175 ppm to 3,200 ppm Cu. Four of these anomalies occur as separate clusters of anomalous samples within the Bowry Member of the Battys Bend Formation.

Each of these anomalies have been numbered and will be dealt with individually.

Cu Anomaly One, occurring in the southwestern corner of the grid near the Reece Dam, is a two point anomaly representing samples No. 44763 and No. 67083.

The maximum value for this anomaly is 290 ppm Cu but the samples are also anomalous for Pb and Zn, high in Mn (1650 & 700 ppm) and moderately high for Fe (26% and 12.3%).

Sample No. 67805 is very gossanous with amounts of pyrite, haematite, magnetite and traces of chalcopyrite.

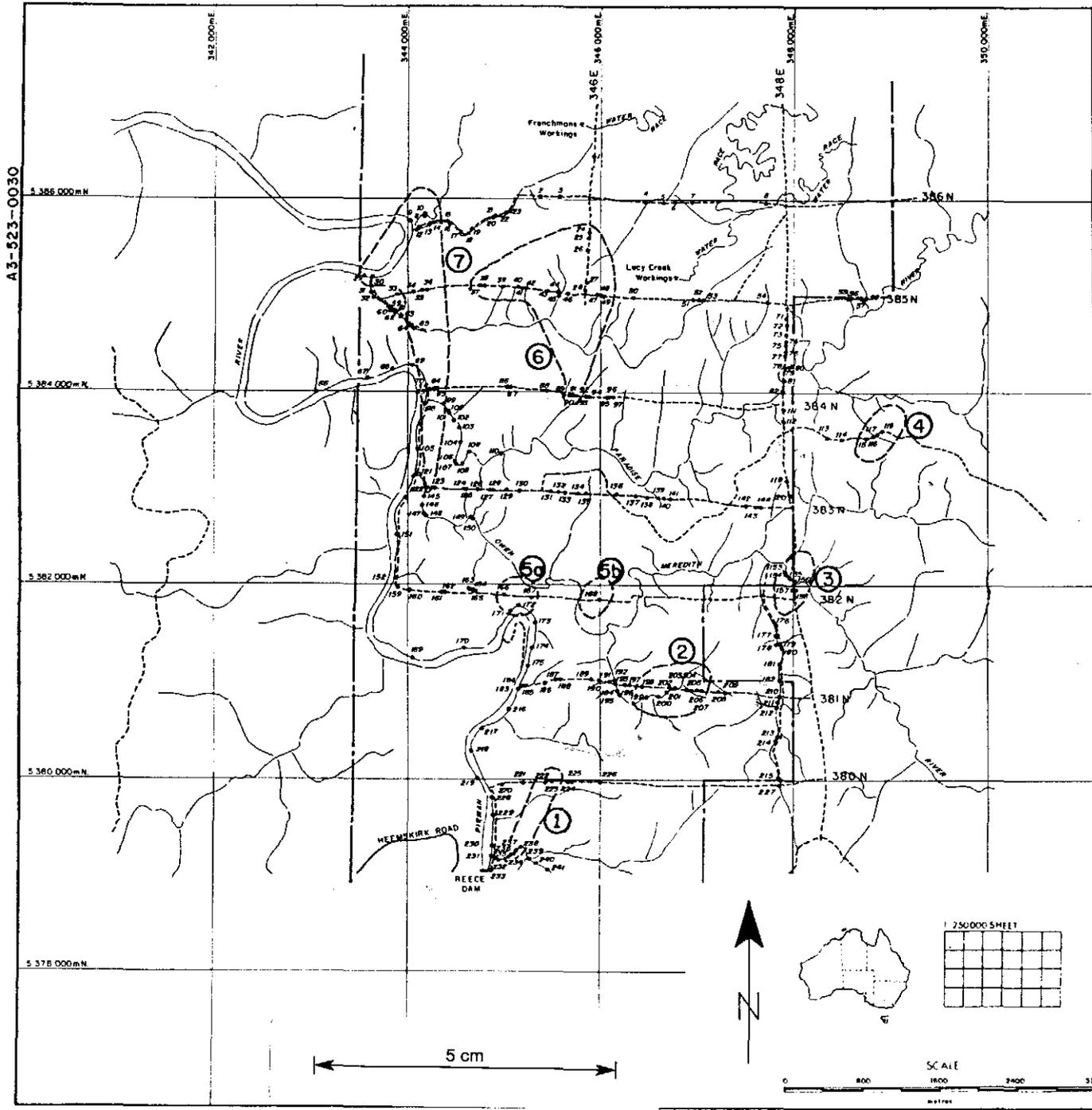
Cu Anomaly Two is a four point anomaly occurring mainly in phyllitic green schist rocks. Maximum Cu value occurs in sample No. 64382, a gossanous ironstone containing minor pyrite which runs at 49.6% Fe. This copper anomaly has one other anomalous sample adjacent. Sample. 64379 reported 275 ppm Zn.

Cu Anomaly Three occurs near the Owen Meredith River on the base line at 381,980N. Three samples combine to make this zone anomalous, these being No's 53537, 53539 and 53540. This anomaly occurs within iron stained schists with Fe ranging from 9.4% to a maximum of 24.7% in a pyritic sample. Sample 53539 reported 450 ppm Cu, the maximum for this group.

Sample 53540 is also anomalous for Zn with 325 ppm Zn.

Cu Anomaly Four, occurring on the walking access track over Whaleback Ridge has four anomalous samples. Sample No's 58190, 58191, 58192 and 58193 give values ranging from 275 ppm Cu to 3200 ppm Cu, the highest occurring in an ironstone with 31.9% Fe. This sample also contains moderate Pb and Zn values.

Cu Anomaly 5a of two samples and 5b of a single sample occur on line 382N between 345,000E and 346,000E. Anomaly 5a occurs within meta-igneous rocks with values of 800 ppm and 180 ppm Cu from sample No's 68289 and 58145 respectively. Both



LEGEND

PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.
1	R 64597	82	R 68211	159	R 68220
2	R 68269	84	R 68218	160	R 68221
3	R 68288	86	R 68219	161	R 68222
4	R 68205	87	R 68224	162	R 68223
5	R 68204	87	R 68216	163	R 68224
6	R 68203	88	R 68216	164	R 68225
7	R 68202	89	R 68217	165	R 68226
8	R 68201	91	R 68218	166	R 68227
9	R 68199	91	R 68219	167	R 68228
10	R 68198	92	R 68220	168	R 68229
11	R 68197	92	R 68221	169	R 68230
12	P 53510 - P 53514	93	R 68222	170	R 68231
13	P 53515 - P 53517	94	R 68223	171	R 68232
14	R 68278	95	R 68224	172	R 68233
15	R 68279	96	R 68225	173	R 68234
16	R 68279	97	R 68226	174	R 68235
17	R 68278	98	R 68227	175	R 68236
18	R 68277 - P 53278	100	R 68228	176	R 68237
19	R 68278	101	R 68229	177	R 68238
20	R 68278	102	R 68230	178	R 68239
21	R 68196	103	R 68231	179	R 68240
22	R 68195	104	R 68232	180	R 68241
23	P 53417 - P 53418	105	R 68233	181	R 68242
24	R 64390	106	R 68234	182	R 68243
25	R 64389	107	R 68235	183	R 68244
26	R 64387	108	R 68236	184	R 68245
27	R 64389	109	R 68237	185	R 68246
28	R 64387	110	R 68238	186	R 68247
29	R 64389	111	R 68239	187	R 68248
30	R 64387	112	R 68240	188	R 68249
31	R 64389	113	R 68241	189	R 68250
32	R 64387	114	R 68242	190	R 68251
33	R 64389	115	R 68243	191	R 68252
34	R 64387	116	R 68244	192	R 68253
35	R 64389	117	R 68245	193	R 68254
36	R 64387	118	R 68246	194	R 68255
37	R 64389	119	R 68247	195	R 68256
38	R 64387	120	R 68248	196	R 68257
39	R 64389	121	R 68249	197	R 68258
40	R 64387	122	R 68250	198	R 68259
41	R 64389	123	R 68251	199	R 68260
42	R 64387	124	R 68252	200	R 68261
43	R 64389	125	R 68253	201	R 68262
44	R 64387	126	R 68254	202	R 68263
45	R 64389	127	R 68255	203	R 68264
46	R 64387	128	R 68256	204	R 68265
47	R 64389	129	R 68257	205	R 68266
48	R 64387	130	R 68258	206	R 68267
49	R 64389	131	R 68259	207	R 68268
50	R 64387	132	R 68260	208	R 68269
51	R 64389	133	R 68261	209	R 68270
52	R 64387	134	R 68262	210	R 68271
53	R 64389	135	R 68263	211	R 68272
54	R 64387	136	R 68264	212	R 68273
55	R 64389	137	R 68265	213	R 68274
56	R 64387	138	R 68266	214	R 68275
57	R 64389	139	R 68267	215	R 68276
58	R 64387	140	R 68268	216	R 68277
59	R 64389	141	R 68269	217	R 68278
60	R 64387	142	R 68270	218	R 68279
61	R 64389	143	R 68271	219	R 68280
62	R 64387	144	R 68272	220	R 68281
63	R 64389	145	R 68273	221	R 68282
64	R 64387	146	R 68274	222	R 68283
65	R 64389	147	R 68275	223	R 68284
66	R 64387	148	R 68276	224	R 68285
67	R 64389	149	R 68277	225	R 68286
68	R 64387	150	R 68278	226	R 68287
69	R 64389	151	R 68279	227	R 68288
70	R 64387	152	R 68280	228	R 68289
71	R 64389	153	R 68281	229	R 68290
72	R 64387	154	R 68282	230	R 68291
73	R 64389	155	R 68283	231	R 68292
74	R 64387	156	R 68284	232	R 68293
75	R 64389	157	R 68285	233	R 68294
76	R 64387	158	R 68286	234	R 68295
77	R 64389	159	R 68287	235	R 68296
78	R 64387	160	R 68288	236	R 68297
79	R 64389	161	R 68289	237	R 68298
80	R 64387	162	R 68290	238	R 68299
81	R 64389	163	R 68291	239	R 68300
82	R 64387	164	R 68292	240	R 68301
		165	R 68293	241	R 68302

N.B - R58155 - etc. = Rock Chip Sample.
 S 65876 - etc. = Stream Sediment Sample.
 P 53590 - etc. = Panned Concentrate Sample.

— E.L. Boundary.

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 MINERAL RESOURCES DIVISION

PROJECT ARTHUR LINEAMENT E.L. 22/85

GEOCHEM. HIGHLIGHTS
 Cu.

Compiled N.F. Date 7-6-87 Scale 1:40,000

Latitude Longitude PLAN NO

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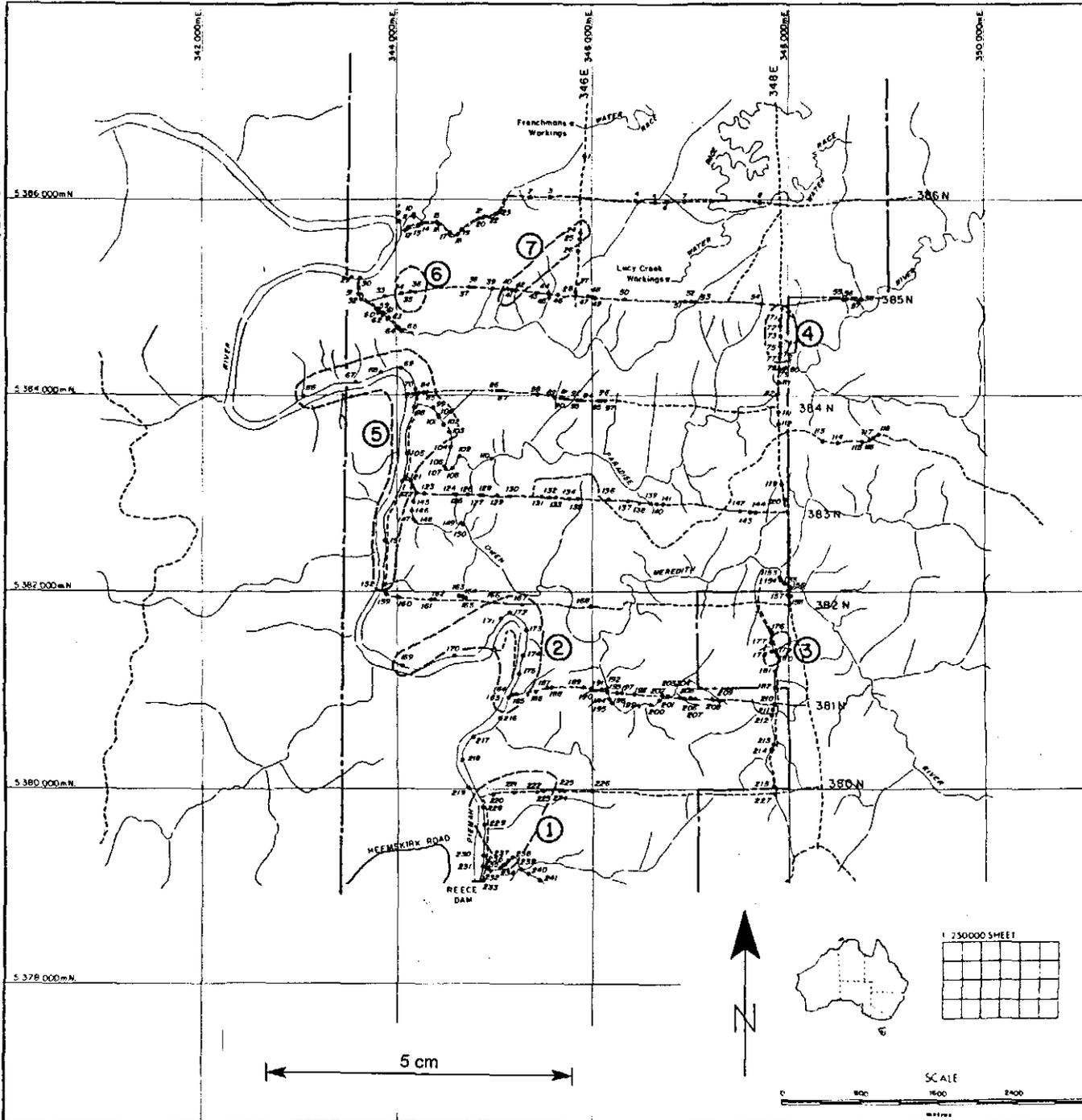
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FIGURE 4

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Sheet A.1 (continued) with sheet A.2
 Sheet A.3 (see report packets)

A3-523-0031



LEGEND

PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.
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2	R 48288	84	R 68212	159	R 68221
3	R 48289	85	R 68213	160	R 68222
4	R 48290	86	R 68214	161	R 68223
5	R 48291	87	R 68215	162	R 68224
6	R 48292	88	R 68216	163	R 68225
7	R 48293	89	R 68217	164	R 68226
8	R 48294	90	R 68218	165	R 68227
9	R 48295	91	R 68219	166	R 68228
10	R 48296	92	R 68220	167	R 68229
11	R 48297	93	R 68221	168	R 68230
12	R 48298	94	R 68222	169	R 68231
13	R 48299	95	R 68223	170	R 68232
14	R 48300	96	R 68224	171	R 68233
15	R 48301	97	R 68225	172	R 68234
16	R 48302	98	R 68226	173	R 68235
17	R 48303	99	R 68227	174	R 68236
18	R 48304	100	R 68228	175	R 68237
19	R 48305	101	R 68229	176	R 68238
20	R 48306	102	R 68230	177	R 68239
21	R 48307	103	R 68231	178	R 68240
22	R 48308	104	R 68232	179	R 68241
23	R 48309	105	R 68233	180	R 68242
24	R 48310	106	R 68234	181	R 68243
25	R 48311	107	R 68235	182	R 68244
26	R 48312	108	R 68236	183	R 68245
27	R 48313	109	R 68237	184	R 68246
28	R 48314	110	R 68238	185	R 68247
29	R 48315	111	R 68239	186	R 68248
30	R 48316	112	R 68240	187	R 68249
31	R 48317	113	R 68241	188	R 68250
32	R 48318	114	R 68242	189	R 68251
33	R 48319	115	R 68243	190	R 68252
34	R 48320	116	R 68244	191	R 68253
35	R 48321	117	R 68245	192	R 68254
36	R 48322	118	R 68246	193	R 68255
37	R 48323	119	R 68247	194	R 68256
38	R 48324	120	R 68248	195	R 68257
39	R 48325	121	R 68249	196	R 68258
40	R 48326	122	R 68250	197	R 68259
41	R 48327	123	R 68251	198	R 68260
42	R 48328	124	R 68252	199	R 68261
43	R 48329	125	R 68253	200	R 68262
44	R 48330	126	R 68254	201	R 68263
45	R 48331	127	R 68255	202	R 68264
46	R 48332	128	R 68256	203	R 68265
47	R 48333	129	R 68257	204	R 68266
48	R 48334	130	R 68258	205	R 68267
49	R 48335	131	R 68259	206	R 68268
50	R 48336	132	R 68260	207	R 68269
51	R 48337	133	R 68261	208	R 68270
52	R 48338	134	R 68262	209	R 68271
53	R 48339	135	R 68263	210	R 68272
54	R 48340	136	R 68264	211	R 68273
55	R 48341	137	R 68265	212	R 68274
56	R 48342	138	R 68266	213	R 68275
57	R 48343	139	R 68267	214	R 68276
58	R 48344	140	R 68268	215	R 68277
59	R 48345	141	R 68269	216	R 68278
60	R 48346	142	R 68270	217	R 68279
61	R 48347	143	R 68271	218	R 68280
62	R 48348	144	R 68272	219	R 68281
63	R 48349	145	R 68273	220	R 68282
64	R 48350	146	R 68274	221	R 68283
65	R 48351	147	R 68275	222	R 68284
66	R 48352	148	R 68276	223	R 68285
67	R 48353	149	R 68277	224	R 68286
68	R 48354	150	R 68278	225	R 68287
69	R 48355	151	R 68279	226	R 68288
70	R 48356	152	R 68280	227	R 68289
71	R 48357	153	R 68281	228	R 68290
72	R 48358	154	R 68282	229	R 68291
73	R 48359	155	R 68283	230	R 68292
74	R 48360	156	R 68284	231	R 68293
75	R 48361	157	R 68285	232	R 68294
76	R 48362	158	R 68286	233	R 68295
77	R 48363	159	R 68287	234	R 68296
78	R 48364	160	R 68288	235	R 68297
79	R 48365	161	R 68289	236	R 68298
80	R 48366	162	R 68290	237	R 68299
81	R 48367	163	R 68291	238	R 68300
82	R 48368	164	R 68292	239	R 68301
				240	R 68302
				241	R 68303

N.B. - R58155 - etc.: Rock Chip Sample.
 S 65876 - etc.: Stream Sediment Sample.
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— E.L. Boundary.



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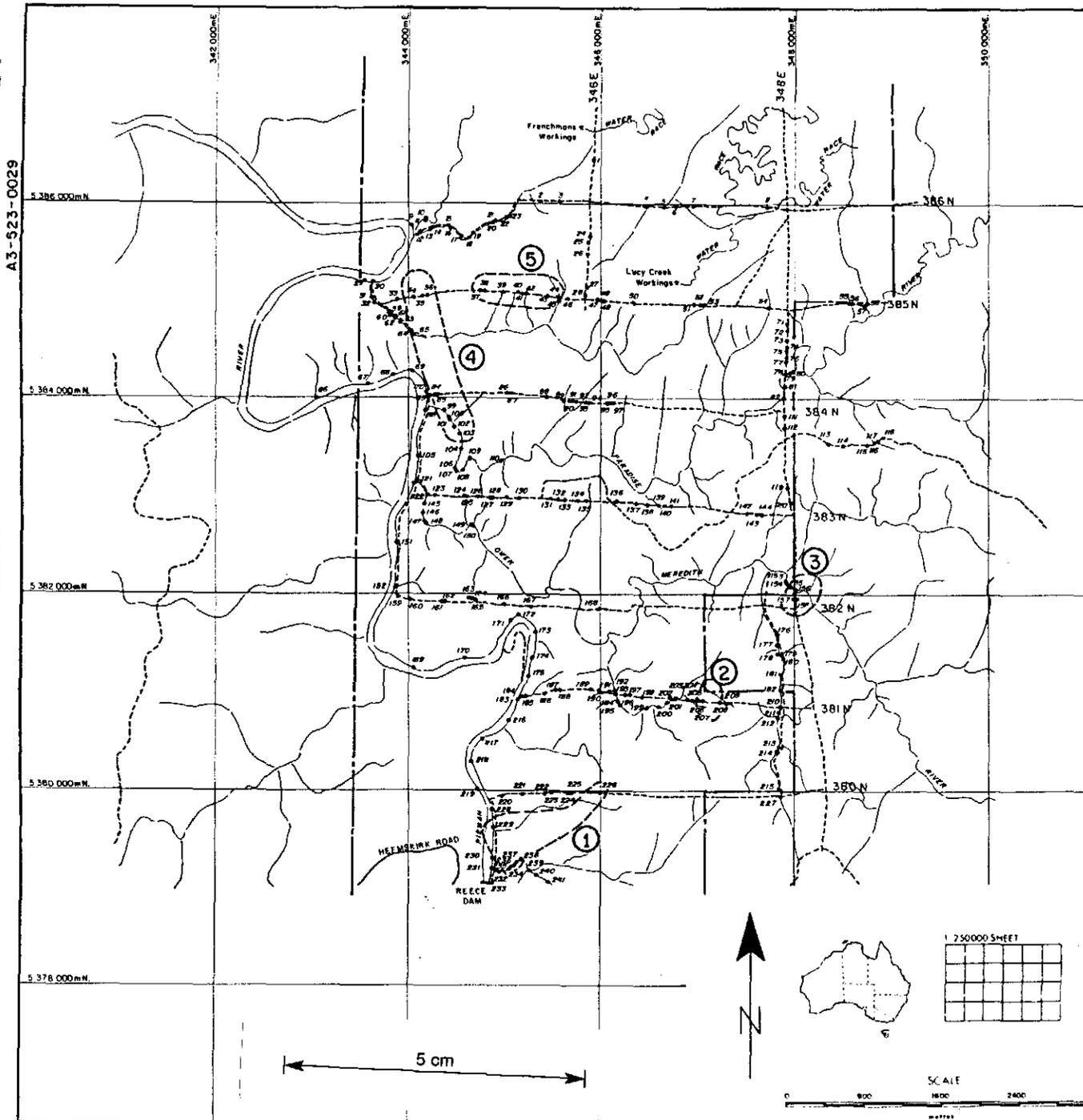
GEOCHEM. HIGHLIGHTS
Pb

Compiled N.F.	Date 7-6-87	Scale 1:40,000
Latitude	Longitude	PLAN NO
Drawn N.W.D.S.	File No	A3-523-0031

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FIGURE 5

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LEGEND				
PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.	SAMPLE No.
1	R 44392	85	R 49211	159
2	R 44208	86	R 49212	160
3	R 48108	87	R 49213	161
4	R 48205	88	R 49214	162
5	R 48201	89	R 49215	163
6	R 48202	90	R 49216	164
7	R 48201	91	R 49217	165
8	R 48193	92	R 49218	166
9	R 48193	93	R 49219	167
10	R 48193	94	R 49220	168
11	R 48193	95	R 49221	169
12	R 48193	96	R 49222	170
13	R 48193	97	R 49223	171
14	R 48193	98	R 49224	172
15	R 48193	99	R 49225	173
16	R 48193	100	R 49226	174
17	R 48193	101	R 49227	175
18	R 48193	102	R 49228	176
19	R 48193	103	R 49229	177
20	R 48193	104	R 49230	178
21	R 48193	105	R 49231	179
22	R 48193	106	R 49232	180
23	R 48193	107	R 49233	181
24	R 48193	108	R 49234	182
25	R 48193	109	R 49235	183
26	R 48193	110	R 49236	184
27	R 48193	111	R 49237	185
28	R 48193	112	R 49238	186
29	R 48193	113	R 49239	187
30	R 48193	114	R 49240	188
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32	R 48193	116	R 49242	190
33	R 48193	117	R 49243	191
34	R 48193	118	R 49244	192
35	R 48193	119	R 49245	193
36	R 48193	120	R 49246	194
37	R 48193	121	R 49247	195
38	R 48193	122	R 49248	196
39	R 48193	123	R 49249	197
40	R 48193	124	R 49250	198
41	R 48193	125	R 49251	199
42	R 48193	126	R 49252	200
43	R 48193	127	R 49253	201
44	R 48193	128	R 49254	202
45	R 48193	129	R 49255	203
46	R 48193	130	R 49256	204
47	R 48193	131	R 49257	205
48	R 48193	132	R 49258	206
49	R 48193	133	R 49259	207
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55	R 48193	139	R 49265	213
56	R 48193	140	R 49266	214
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58	R 48193	142	R 49268	216
59	R 48193	143	R 49269	217
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61	R 48193	145	R 49271	219
62	R 48193	146	R 49272	220
63	R 48193	147	R 49273	221
64	R 48193	148	R 49274	222
65	R 48193	149	R 49275	223
66	R 48193	150	R 49276	224
67	R 48193	151	R 49277	225
68	R 48193	152	R 49278	226
69	R 48193	153	R 49279	227
70	R 48193	154	R 49280	228
71	R 48193	155	R 49281	229
72	R 48193	156	R 49282	230
73	R 48193	157	R 49283	231
74	R 48193	158	R 49284	232
75	R 48193	159	R 49285	233
76	R 48193	160	R 49286	234
77	R 48193	161	R 49287	235
78	R 48193	162	R 49288	236
79	R 48193	163	R 49289	237
80	R 48193	164	R 49290	238
81	R 48193	165	R 49291	239
82	R 48193	166	R 49292	240
			R 49293	241

N.B. - R 58155 - etc. = Rock Chip Sample
 S 65876 - etc. = Stream Sediment Sample.
 P 53590 - etc. = Panned Concentrate Sample.

--- E.L. Boundary.

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED
 MINERAL RESOURCES DIVISION

PROJECT ARTHUR LINEAMENT E.L.22/85

GEOCHEM. HIGHLIGHTS
Zn.

Computed N.F. Date 7-6-87 Scale 1:40,000

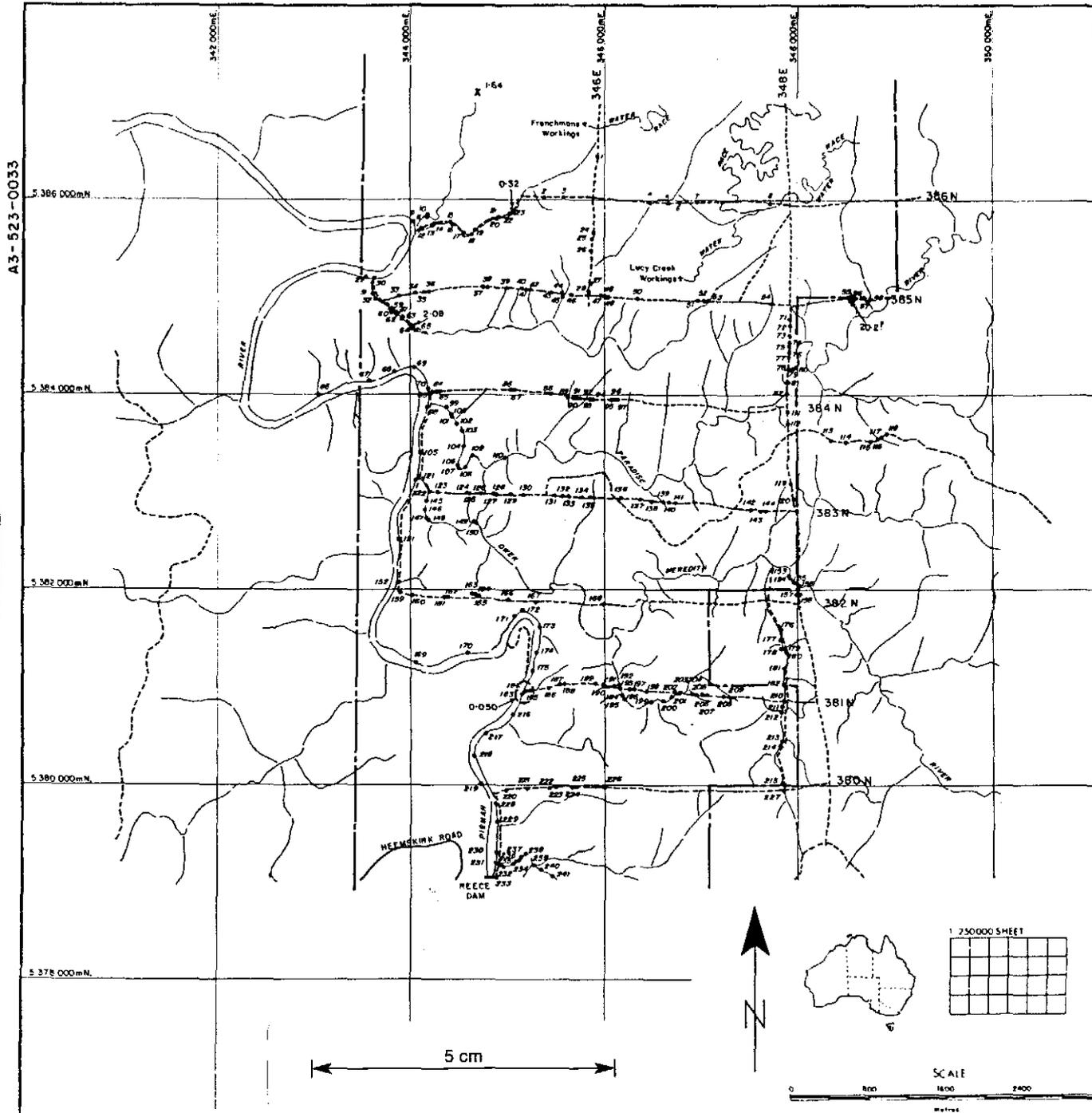
Latitude	Longitude	PLAN No.
Drawn N.W.S.	File No.	A3-523-0029

014

FIGURE 6

855015

Use A3 for heading within sheet.
 Use A2 for report packets.



LEGEND					
PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.	PLAN No.	SAMPLE No.
1	R 64392	83	R 66211	189	R 68220
2	R 66289	84	R 66212	190	R 68221
3	R 66288	85	R 66213	191	R 68222
4	R 66287	86	R 66214	192	R 68223
5	R 66286	87	R 66215	193	R 68224
6	R 66285	88	R 66216	194	R 68225
7	R 66284	89	R 66217	195	R 68226
8	R 66283	90	R 66218	196	R 68227
9	R 66282	91	R 66219	197	R 68228
10	R 66281	92	R 66220	198	R 68229
11	R 66280	93	R 66221	199	R 68230
12	R 66279	94	R 66222	200	R 68231
13	R 66278	95	R 66223	201	R 68232
14	R 66277	96	R 66224	202	R 68233
15	R 66276	97	R 66225	203	R 68234
16	R 66275	98	R 66226	204	R 68235
17	R 66274	99	R 66227	205	R 68236
18	R 66273	100	R 66228	206	R 68237
19	R 66272	101	R 66229	207	R 68238
20	R 66271	102	R 66230	208	R 68239
21	R 66270	103	R 66231	209	R 68240
22	R 66269	104	R 66232	210	R 68241
23	R 66268	105	R 66233	211	R 68242
24	R 66267	106	R 66234	212	R 68243
25	R 66266	107	R 66235	213	R 68244
26	R 66265	108	R 66236	214	R 68245
27	R 66264	109	R 66237	215	R 68246
28	R 66263	110	R 66238	216	R 68247
29	R 66262	111	R 66239	217	R 68248
30	R 66261	112	R 66240	218	R 68249
31	R 66260	113	R 66241	219	R 68250
32	R 66259	114	R 66242	220	R 68251
33	R 66258	115	R 66243	221	R 68252
34	R 66257	116	R 66244	222	R 68253
35	R 66256	117	R 66245	223	R 68254
36	R 66255	118	R 66246	224	R 68255
37	R 66254	119	R 66247	225	R 68256
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41	R 66250	123	R 66251	229	R 68260
42	R 66249	124	R 66252	230	R 68261
43	R 66248	125	R 66253	231	R 68262
44	R 66247	126	R 66254	232	R 68263
45	R 66246	127	R 66255	233	R 68264
46	R 66245	128	R 66256	234	R 68265
47	R 66244	129	R 66257	235	R 68266
48	R 66243	130	R 66258	236	R 68267
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50	R 66241	132	R 66260	238	R 68269
51	R 66240	133	R 66261	239	R 68270
52	R 66239	134	R 66262	240	R 68271
53	R 66238	135	R 66263	241	R 68272
54	R 66237	136	R 66264	242	R 68273
55	R 66236	137	R 66265	243	R 68274
56	R 66235	138	R 66266	244	R 68275
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62	R 66229	144	R 66272	250	R 68281
63	R 66228	145	R 66273	251	R 68282
64	R 66227	146	R 66274	252	R 68283
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67	R 66224	149	R 66277	255	R 68286
68	R 66223	150	R 66278	256	R 68287
69	R 66222	151	R 66279	257	R 68288
70	R 66221	152	R 66280	258	R 68289
71	R 66220	153	R 66281	259	R 68290
72	R 66219	154	R 66282	260	R 68291
73	R 66218	155	R 66283	261	R 68292
74	R 66217	156	R 66284	262	R 68293
75	R 66216	157	R 66285	263	R 68294
76	R 66215	158	R 66286	264	R 68295
77	R 66214	159	R 66287	265	R 68296
78	R 66213	160	R 66288	266	R 68297
79	R 66212	161	R 66289	267	R 68298
80	R 66211	162	R 66290	268	R 68299
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82	R 66209	164	R 66292	270	R 68301
83	R 66208	165	R 66293	271	R 68302
84	R 66207	166	R 66294	272	R 68303
85	R 66206	167	R 66295	273	R 68304
86	R 66205	168	R 66296	274	R 68305
87	R 66204	169	R 66297	275	R 68306
88	R 66203	170	R 66298	276	R 68307
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90	R 66201	172	R 66300	278	R 68309
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92	R 66199	174	R 66302	280	R 68311
93	R 66198	175	R 66303	281	R 68312
94	R 66197	176	R 66304	282	R 68313
95	R 66196	177	R 66305	283	R 68314
96	R 66195	178	R 66306	284	R 68315
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98	R 66193	180	R 66308	286	R 68317
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109	R 66182	191	R 66319	297	R 68328
110	R 66181	192	R 66320	298	R 68329
111	R 66180	193	R 66321	299	R 68330
112	R 66179	194	R 66322	300	R 68331
113	R 66178	195	R 66323	301	R 68332
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115	R 66176	197	R 66325	303	R 68334
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127	R 66164	209	R 66337	315	R 68346
128	R 66163	210	R 66338	316	R 68347
129	R 66162	211	R 66339	317	R 68348
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133	R 66158	215	R 66343	321	R 68352
134	R 66157	216	R 66344	322	R 68353
135	R 66156	217	R 66345	323	R 68354
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170	R 66121	252	R 66380	358	R 68389
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172	R 66119	254	R 66382	360	R 68391
173	R 66118	255	R 66383	361	R 68392
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185	R 66106	267	R 66395	373	R 68404
186	R 66105	268	R 66396	374	R 68405
187	R 66104	269	R 66397	375	R 68406
188	R 66103	270	R 66398	376	R 68407
189	R 66102	271	R 66399	377	R 68408
190	R 66101	272	R 66400	378	R 68409
191	R 66100	273	R 66401	379	R 68410
192	R 66099	274	R 66402	380	R 68411
193	R 66098	275	R 66403	381	R 68412
194	R 66097	276	R 66404	382	R 68413
195	R 66096	277	R 66405	383	R 68414
196	R 66095	278	R 66406	384	R 68415
197	R 66094	279	R 66407	385	R 68416
198	R				

these samples are characterized by lower Fe (5.1% and 5.6%) and moderately high Mn values.

Sample No. 68282 constitutes anomaly 5b with 175 ppm Cu, average Fe (4.5%) and a minor trace of Au (0.017 ppm). This anomaly occurs in a quartz schist.

The sixth anomalous zone contains seven samples with anomalous Cu. Rock types encountered include metabasalts, volcanicwackes and quartz mica schists. The highest anomalous value of 705 ppm occurs in a feldspathic metabasalt on line 346,000E at 385,640N. Zn and Pb anomalous values also exist within this area.

The final Cu anomaly, No. 7, contains nine anomalous values ranging from 175 ppm Cu to 770 ppm Cu. This anomalous zone occurs mainly along the Pieman River in predominantly metabasic igneous and quartz mica phyllite rock types. Some of these anomalous samples have also given anomalous Pb-Zn values.

Anomalous Lead (Fig. 5)

Seven Pb anomalies are present on the grid with anomalous values ranging from 75 ppm to 575 ppm Pb. Again as for the Cu anomalies, some of the Pb anomalies including the highest value, occur within the Bowry Member of the Battys Bend Formation.

As with the Cu anomalies these will be dealt with in numerical order.

Pb Anomaly One occurs within phyllitic green schists and meta-igneous rocks of the Bowry Member. One sample, No. 67085, of gossanous outcrop contains anomalous Cu and Pb but sample No. 44763 holds more interest with anomalous values for Cu, Pb and Zn, 275 ppm, 575 ppm and 525 ppm respectively. Higher than average Fe content (12.3%) was also reported from this sample.

Pb Anomaly Two consists of five anomalous samples with Pb values of between 80-137 ppm occurring in phyllitic sediments and metamorphosed basic igneous rocks between 2 and 4 km downstream from the Reece Dam. Sample No. 58145 with 105 ppm Pb is also anomalous for Cu with 180 ppm Cu, corresponding to Cu anomaly No. 5a.

Pb Anomaly Three of a single sample occurs in Doctors Creek midway between lines 381N and 382N. Sample No. 67072, a granophyric intrusive assayed 175 ppm Pb. Cu anomaly No. 3 and Zn anomaly No. 3 occur some 500m to the NNE.

Pb Anomaly Four contains two marginally anomalous samples both with 75 ppm Pb values. Occurring in mica quartz phyllites on line 348E between 384,500N and 384,800N, both samples contain below average Fe, Mn, Cu and Zn. The nearest anomalous values to these are some 1.5 km to the southeast (Cu anomaly No. 4).

Pb Anomaly Five occurs along the Pieman River from line 382N downstream to the E.L. boundary at 384,150N, 343,600E. It contains seven anomalous Pb values of between 75 ppm to 550 ppm Pb. This anomalous zone occurs mainly within micaceous quartz phyllites of the Batty Bend Formation and has some overlap with Zn anomaly No. 4 and Cu anomaly No. 7.

One sample within this anomalous zone contains 360 ppm Cu, 120 ppm Pb and 510 ppm Zn. This sample occurs near the start of line 384N on the Pieman River.

Pb Anomalies Six and Seven occur on line 385N at 344,200E and at 345,200E extending to 346E at 385,700N.

Anomaly Six of a single sample, with 190 ppm Pb, is supported by 770 ppm Cu and 275 ppm Zn values with another sample some 140m to the west having 185 ppm Cu. Anomaly Six is overlapped by anomalies No. 7 for Cu and No. 4 for Zn.

Anomaly Seven, a two point anomaly, assayed Pb values of 295 ppm and 100 ppm but also contains Cu values of 325 ppm and 705 ppm.

Both anomaly Six and Seven occur within quartz mica phyllites and meta-igneous rocks (?basalts) of the Battys Bend Formation.

Anomalous Zinc (Fig. 6)

Two major areas of the Lucy Creek Grid have been found to be anomalous for Zn, these being a thin strip to the south of the grid which closely corresponds the outline of the Bowry Member of the Battys Bend Formation, whilst the second in the central west of the grid covers some 1.5 km² centred on Lucy Creek.

Anomalous Zn values range from 275 ppm Zn to 525 ppm Zn with this maximum value occurring in the south west corner of the grid within Bowry member rocks.

Zn Anomaly One, of three points, contains Zn values of 395 ppm, 505 ppm and 525 ppm together with significant Cu and Pb assays. This anomaly occurs

in a highly stressed shear zone near the Reece Dam and extends eastwards along line 380N.

Zn Anomaly Two of a single point and Anomaly Three, again, of a single point occur on line 381N at 347,000E and on line 382N at 348,000E respectively. Both occur within greenschist facies rocks.

Assay values for these points are 275 ppm Zn for Anomaly Two and 325 ppm Zn for Anomaly Three. Both these points correspond to significantly anomalous values for Cu (175 ppm and 1025 ppm Cu).

Zn Anomaly Four with values of 275 ppm, 340 ppm, 325 ppm and 510 ppm Zn occurs in quartz mica phyllites and meta-igneous rocks of the Battys Bend Formation. This anomaly covers the area from 344,500E, 383,500N to 344,000E, 385,000N.

Zn Anomaly Five reported 270 ppm and 305 ppm Zn from a meta-gabbro and a chloritic schist on line 385N. This anomalous zone also contains moderately high Cu and Pb values.

Anomalous (Au) Gold

Only marginally anomalous values for Au were returned from the Lucy Creek Block with a maximum value of 0.042 ppm Au.

3.1.2. Stream Sediment Sampling

No distinctly anomalous value for Cu, Zn, Pb or Au were recorded from the Lucy Creek Grid. Weakly anomalous values ranging from 15-36 ppm Cu, 13-70 ppm Pb and 30-65 ppm Zn have been recorded which apparently reflect the two broad geochemically anomalous zones as defined by rock chip geochemical data.

3.1.3. Panned Concentrate Sampling (Fig. 7)

Encouraging results were gained from five samples taken from the Lucy Creek Grid. Anomalous values ranged from 0.179 ppm to 20.290 ppm Au.

Four anomalous values are worth mention - samples No. 58186 at 0.32 ppm Au, No. 58162 at 1.64 ppm Au, No. 53590 at 2.08 ppm Au and No. 65883 at 20.29 ppm Au.

Samples No. 58162, No. 58186 and No. 53590 occur within two kilometres of each other whilst Sample No. 65883 is a single sample located on line 385N at 348,580E.

Sample No. 65883 at 20.29 ppm Au is the best assay of Au on the grid to date. It was collected from an area of quartz mica schists and phyllites of the Bowry Member. This member could host the source for some of the Au.

Other anomalous values occur in the Battys Bend Formation, associated with rock types such as a volcanicwacke (No. 53590 at 2.08 ppm Au) or a greenschist (No. 58186 at 0.32 ppm Au) and finally with metabasic igneous rocks (No. 58162 at 1.64 ppm Au).

Au values for both stream sediment and panned concentrate samples are plotted on Plans 9 and 10.

The relatively short dispersion trails for Au may indicate a source within the bedrock near to the sample point. Closer examination of individual Au grains would help in defining a source.

3.2. Geology Plans 11 & 12)

Field mapping has defined five broadly grouped rock types:-

- a) altered basic igneous rocks;
 - b) basic volcanogenic sediments and quartz mica schists;
 - c) phyllitic quartz-rich meta-sediments and variants;
 - d) metasomatically and contact metamorphosed phyllitic rocks including a magnesite marble;
- and
- c) granophyric acid intrusive rocks.

Stratigraphy.

Most of the Lucy Creek Block is underlain by the dominant Battys Bend Formation. This unit includes altered basic igneous rocks, volcanogenic sediments of basic volcanic derivation and quartz mica schists. In addition to these rocks, the easternmost unit of the Battys Bend Formation includes magnesite marbles, magnetite ironstones, metasomatically altered rocks and chlorite schists. This easternmost unit constitutes the Bowry Member of the Battys Bend Formation. Near the Owen Meredith River and Doctors Creek, this member has been intruded by granophyric dykes.

020

The Oonah Formation of phyllitic quartz rich metasediments outcrops to the east and south of the Battys Bend Formation. Rocks belonging to this unit outcrop in the southern part of the Lucy Creek Block.

A considerable portion of the grid is covered by Tertiary quartz gravels, up to 15m thick in some places. These inhibit geological mapping and sampling. Figure 8.

3.2.1. Battys Bend Formation:

Several sub-units within this Formation have been mapped. Feldspathic volcanicwacke; chloritic greenschists; chloritic greenstones, quartz mica schists and phyllites; quartz schists and phyllites, and micaceous schists and phyllites all outcrop on the grid.

These units have a general trend of NNE-SSW turning more westerly towards the south.

Rock types can be grouped into two, these being; meta-sediments and meta-igneous rocks of basic to intermediate composition.

The meta-sediments, dominantly phyllites, are invariably of quartz-mica mineralogy. They are fine grained, porphyroblastic and exhibit varying styles of alteration. Porphyroblasts are sometimes re-crystallized in response to low angle reshearing.

Original rock types have been interpreted as mica-arkosic psammopelites to arkosic fine sandy siltstones (Cowan in Appendix 3).

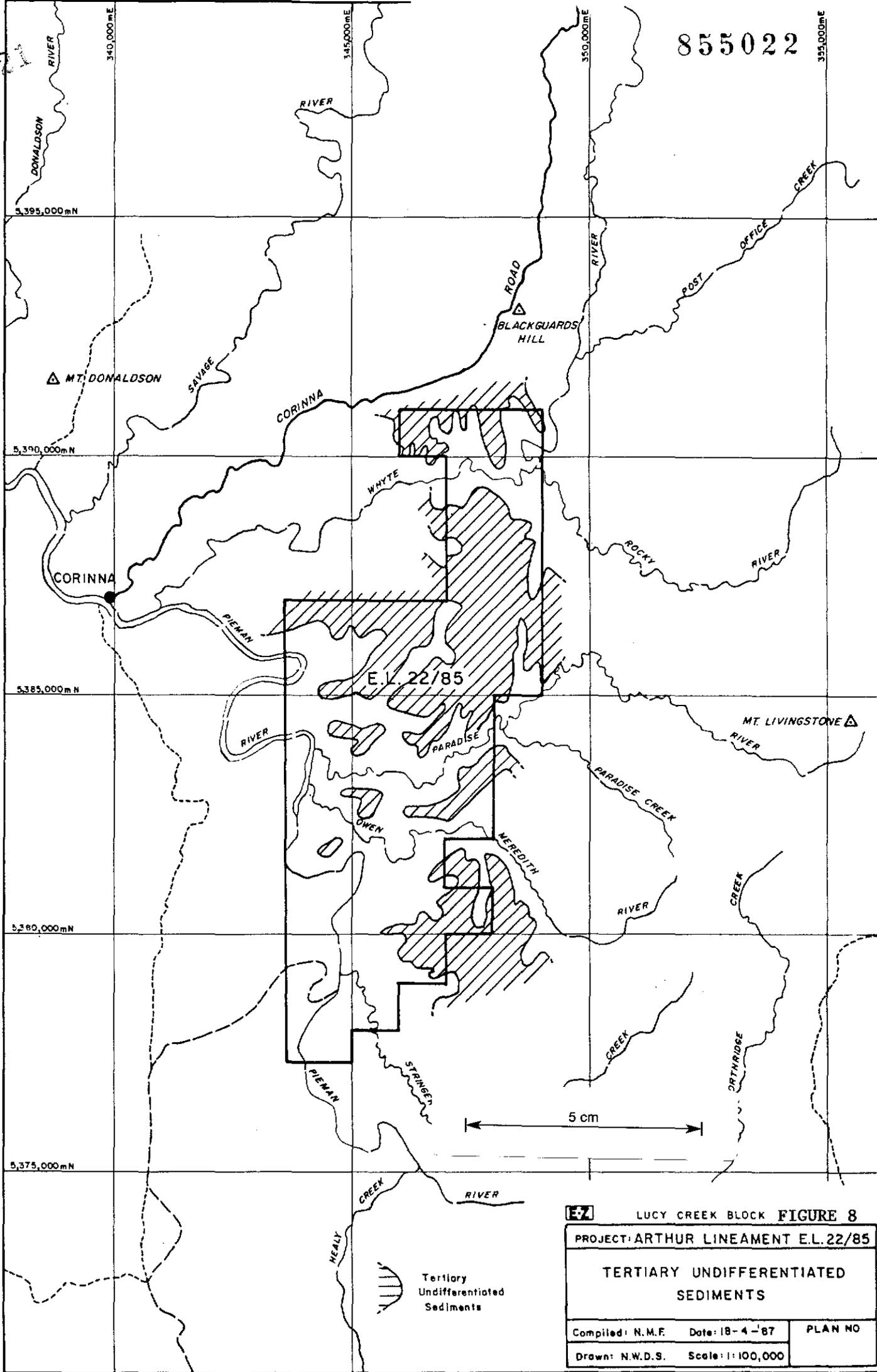
The meta-igneous rocks are also variable in composition and fabric. Cowan also describes rocks with a fine to medium grained matrix of chlorite, mica and quartz with traces of haematite and apatite. Minor traces of hastingsite and tourmaline occur in some samples.. Poikilitic albite phenocrysts are poorly twinned and sometimes stained by epidote. Evenly disseminated opaques and cloudy sphere are not uncommon.

Alteration styles vary from metasomatic to contact metamorphic and mineralogy ranges from partial epidote to pervasive chloritization.

Original rock types have been interpreted as igneous intrusives with basaltic to andesitic composition.

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E7 LUCY CREEK BLOCK FIGURE 8		
PROJECT: ARTHUR LINEAMENT E.L. 22/85		
TERTIARY UNDIFFERENTIATED SEDIMENTS		
Compiled: N.M.F.	Date: 18-4-'87	PLAN NO
Drawn: N.W.D.S.	Scale: 1:100,000	


 Tertiary
Undifferentiated
Sediments

3.2.2. Battys Bend Formation - Bowry Member

This member contains the greatest variety of rock types on the grid. Units encountered consist of metamorphosed basic igneous rocks, chloritic mica schists and metamorphosed quartz phyllites. Other more specific rock types are ironstones, cherty argillites, granophyres, sericitic quartzites (vitric tuff), uralitic metagabbros and a pyritic magnesite marble. These volcanosedimentary rocks and chemical sediments have been intruded by gabbro, now uralitized metagabbro, and granophyre.

Deeper water environments are inferred by the presence of a cherty argillite and a pyritic (re-crystallized) magnesite marble.

Three igneous rocks are worth mentioning, these are, a granophyre, a meta-dolerite and a meta-gabbro.

The granophyre outcrops at two locations and in both instances as a distinct two metre wide dyke-like intrusion. This essentially unaltered porphyritic intrusive has a dominant mineralogy of albite with minor orthoclase and intergrown quartz.

The meta-dolerite outcrops as a grey green, clay rich, schistose, meta-igneous rock. In thin and slabbed section (Cowan - see appendix) it exhibits illitic clay and partly degraded finegrained chlorite with a subophitic textural relationship.

Outcropping on the Pieman River the meta-gabbro exhibits aggregates of uralitic actinolite and albite with minor quartz and epidote in a finer grained matrix. Accessory fine grained muscovite and oxidized pyrite are also evident.

3.2.3. Oonah Formation

Units of this Formation outcrop in the southern and south-eastern sections of the grid. The Oonah Formation probably overlies the Bowry Member of the Battys Bend Formation. Thin greenstone units occur within the quartz phyllites of the basal Oonah Formation at the Cape Copper Mine in Nine Mile Creek and at Golden Ridge. (Henry Shannon - pers.com.) Rocks of the Oonah Formation consist mainly of phyllitic quartz rich sandy siltstones and silty mudstones with bedding thicknesses of 0.25 cm to 25 cm.

Two dominant and easily recognizable cleavages are present. The first is a slaty cleavage which parallels bedding, whilst the second is a crenulation cleavage associated with refolding of isoclinal folds.

3.3 Structural Geology (Figs 9, 10 & 11)

Two cleavages are easily mappable on the Lucy Creek Grid. The first, and dominant, is considered to be a slaty cleavage which is parallel to possible bedding planes and which tends to parallel the overall trend of the lineament.

The second cleavage cross cuts the first and trends generally NNW-SSE dipping steeply to the east and is most probably related to refolding of isoclinal folds during the Devonian.

Seventy three plots of S1 have been divided into two sub areas to give better definition of the regional trend. The northern sub area shows a general strike of approximately 015° , dipping steeply to the east (Figure 10). The southern sub region shows a general strike of 040° and a dip of between $40-70^{\circ}$ to the southeast (Figure 11).

Twenty plots of S2 cleavage have shown a general trend of 335° , dipping steeply (70°) to the northeast (Figure 9).

Both sub areas show a general trend parallel with that of the Arthur Lineament which trends north-south throughout the northern section of the grid but bends westwards in the south to attain an almost east-west trend.

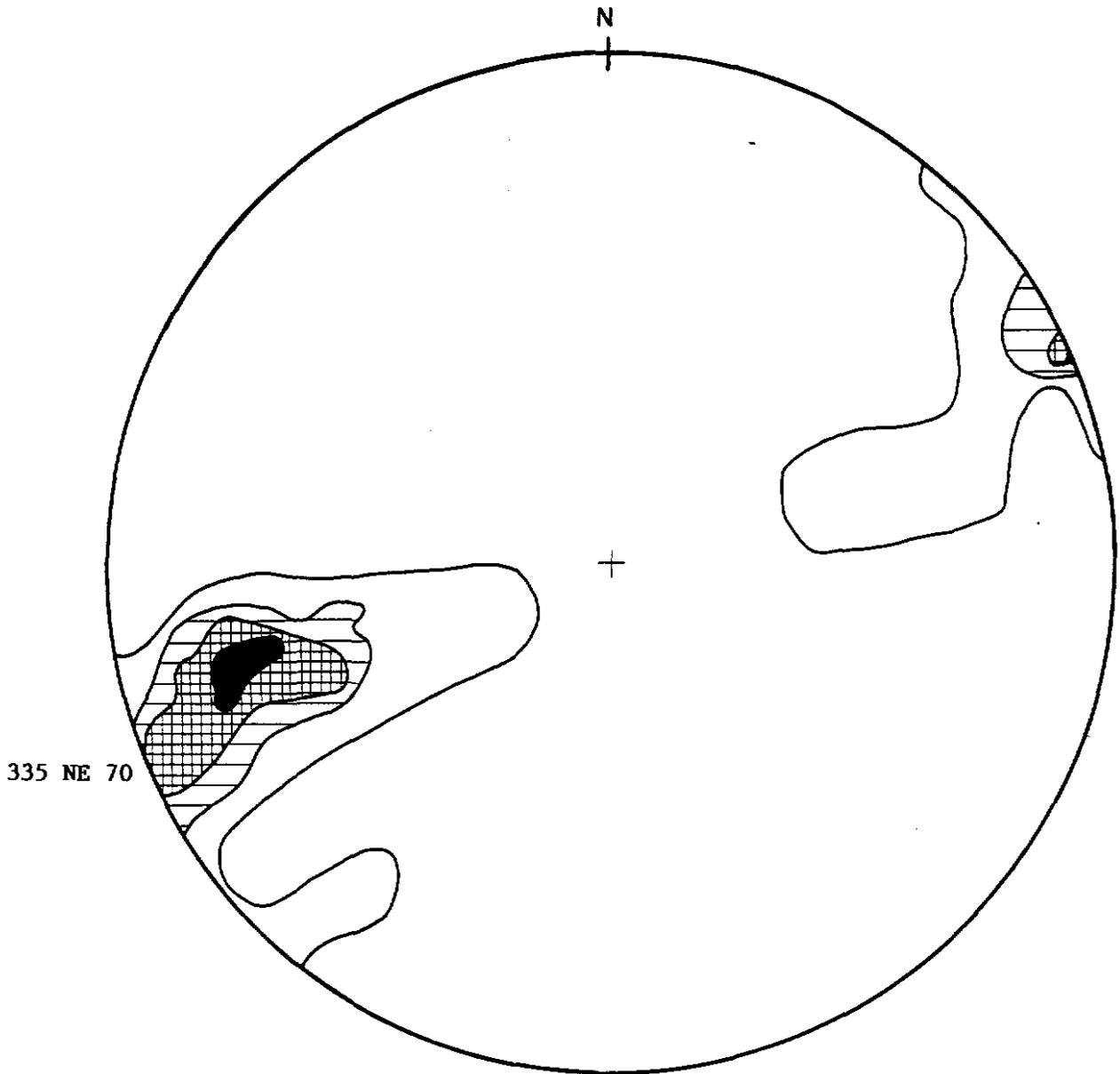
S2 cleavage tends to cut the S1 cleavage at a moderately high angle suggesting refolding at some stage.

3.4. Mineralisation and Alteration

Minor sulphide mineralization has been noted while mapping the Lucy Creek Grid. Fine grained, thinly disseminated pyrite and trace chalcopyrite occur sporadically over the grid but are more common and more significant within parts of the Bowry Member.

These observed sulphide occurrences correlate well with the results of bedrock geochemistry.

02A



POLES TO CLEAVAGE (S₂) LUCY CREEK GRID
 LOWER HEMISPHERE PROJECTION

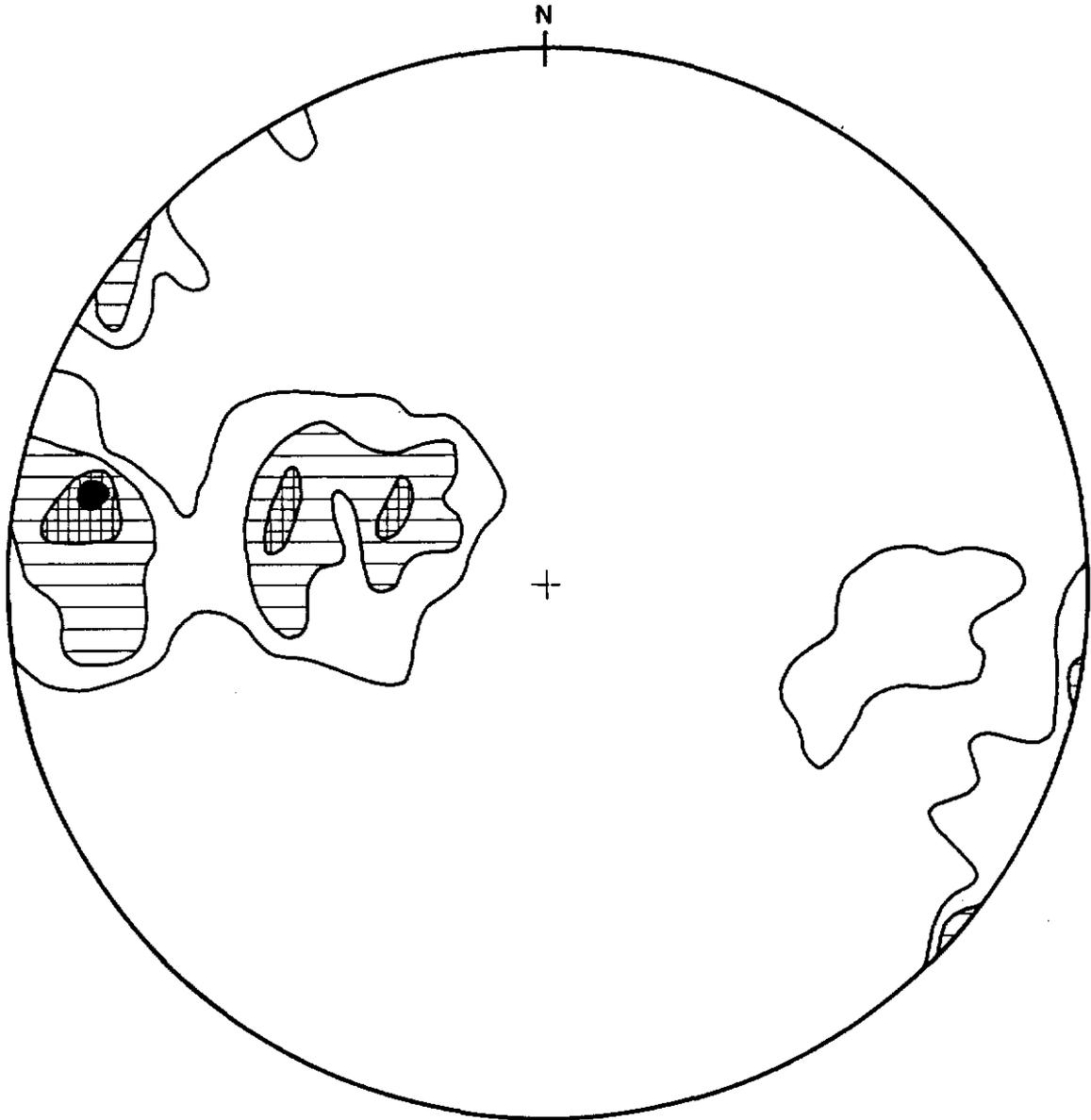
LEGEND

-  16-20%
-  11-15%
-  6-10%
-  0-5%

Maximum = 20%
 (20 plots)

FIGURE 9	
PROJECT: ARTHUR	E.L. 22/85
STRUCTURES	
Compiled: N.M.F. Date: Apr. 1987	PLAN No.
Drawn: N.W.D.S. Scale: N.T.S.	

025



POLES TO CLEAVAGE (S_i) NORTHERN AREA

LEGEND

-  > 12%
-  > 8 - 12%
-  > 5 - 8%
-  0 - 4%

Maximum = 14.8%
(27 plots)



FIGURE 10

PROJECT: ARTHUR E.L.22/85

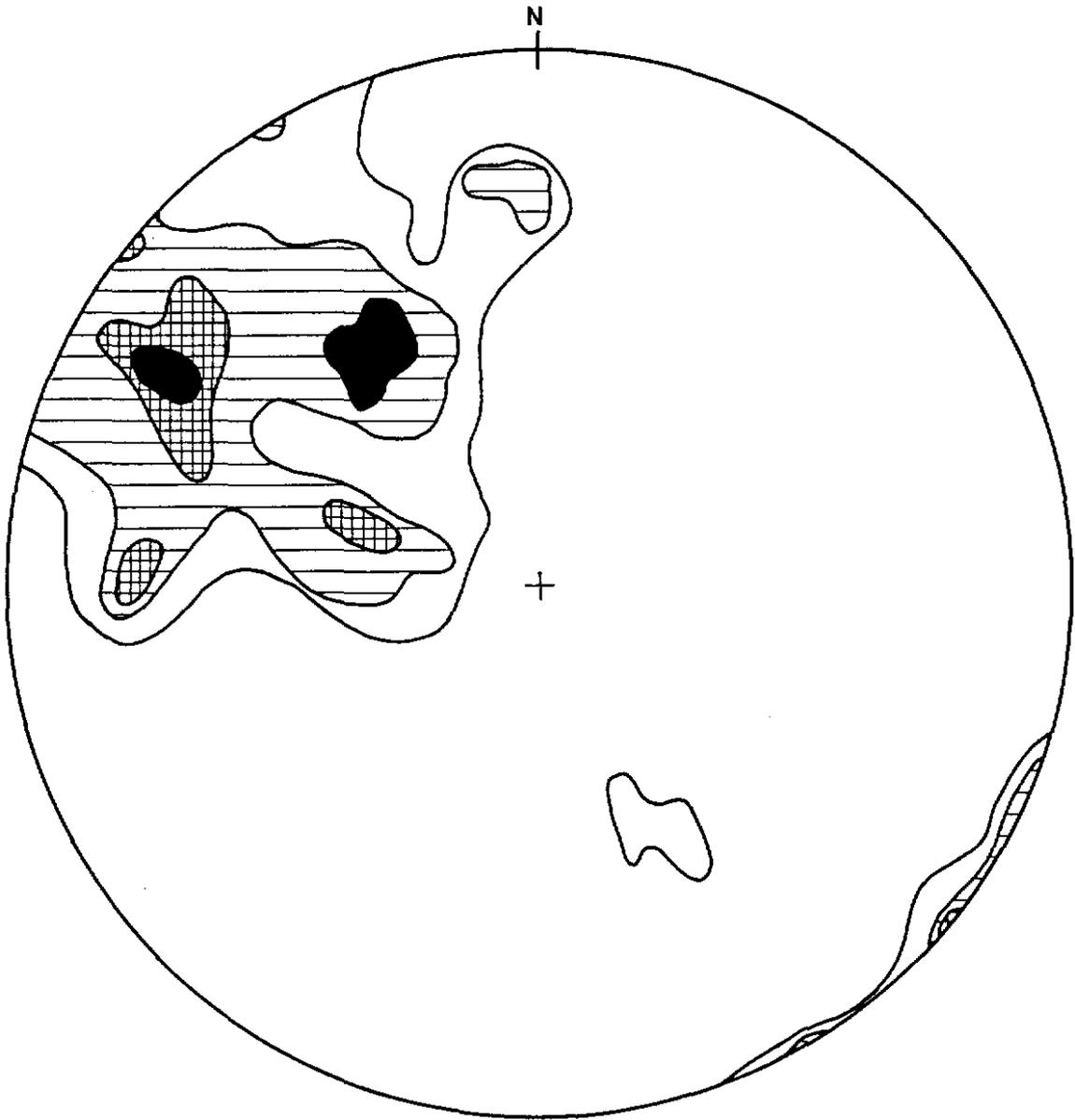
STRUCTURES

Compiled: N.M.F. Date: Apr. 1987

PLAN No.

Drawn: N.W.D.S. Scale: N.T.S.

026



POLES TO CLEAVAGE (Si) SOUTHERN AREA

LEGEND

-  > 8%
-  > 5-7%
-  > 3-5%
-  0-3%

Maximum = 8.7 %
(46 plots)

EZ FIGURE 11

PROJECT: ARTHUR E.L. 22/85

STRUCTURES

Compiled: N.M.F. Date: Apr. 1987

PLAN No.

Drawn: N.W.D.S. Scale: N.T.S.

027

Black slates, quartz mica phyllites and an actinolite tourmaline rock from the Bowry Member all exhibit mineralization of predominantly pyrite (after pyrrhotite in the phyllite) with minor amounts of chalcopyrite.

Alteration styles are as varied as mineralization styles but three main unrelated phases can be defined. Throughout the Lucy Creek Block, feldspathic phyllites tend to exhibit weak carbonate alteration. Higher grade biotitic phyllites and meta basics are partly retrogressively chloritized. The carbonate alteration, which is sideritic in part, is not associated with sulphides.

Within the Bowry Member, alteration is not confined to any specific rock type. A pervasive pleochroic brown and green schorl alteration of metasomatic origin occurs widely. More varied alteration types can be found in rocks of the Bowry Member of the Battys Bend Formation in the southern areas of the Lucy Creek Grid. Sample No. 64381 an actinolite-tourmaline rock exhibits metasomatic characteristics having pervasive clots of pink-brown/dark green pleochroic schorl together with thinly disseminated partly oxidized fine grained pyrite (5%).

Sample No. 68259 a quartz mica phyllite with weak Fe-sulphide mineralization exhibits incipient retrograde alteration effects, namely, sericitization of feldspar and pyritization of pyrrhotite.

Finally sample No. 68266, a weathered hornfels exhibits sporadic metasomatic clots of brown schorl and allanite. This rock is considered a product of contact metamorphic/metasomatic effects to albite-epidote hornfels facies.

3.5 Geophysics - Ground Magnetics

A magnetics programme was attempted over the Lucy Creek Grid using the Scintrex MP3 system. Two base station sites were selected, one for the northern and one for the southern section of the grid.

Traverses were read on lines 380N, 383N, 384N and 385N.

Corrected and usable data was collected from lines 380N and 381N whilst base station failure and poor reliability of the field magnetometer, renders the data collected on other lines less useful.

Profiles for lines 380N, 381N, 385N are shown on Plan 13.

Poor reliability of the Scintrex MP3 system under the unfavourable conditions which prevailed during the survey forced the programme to be suspended.

3.6. Alluvial Gold in Tertiary Gravels (See Appendix)

Coarse alluvial gold occurs in the basal 50cm of gravel wash preserved in Tertiary stream channels at Nancy Spur and Lucy Spur. Although the preserved channels have up to 12m of gravel, most of this thickness carries little or no gold. Old workings and air photo interpretation suggest that the preserved section of the Lucy Spur Channel is 200m wide and 400m long while those at Nancy Spur may be larger.

It is possible that other small channels are preserved under the more extensive and thicker gravel sheet on the main north-south spur. However, the gold likely to be in these channels is estimated as considerably less than one tonne of contained gold. The characteristic erratic distribution of alluvial gold in gutters and channels would make exploration for deposits of this type difficult and expensive.

4.0 SUMMARY

Generally, low to mid greenschist regional metamorphic facies are encountered on the Lucy Creek Grid. The lower grade rocks show accessory chlorite supplementing muscovite, whilst higher grade rocks are part retrogressively chloritized. Crenulation and stress effects, due to ?Devonian deformation are ubiquitous and grade locally into semi-mylonitic re-shearing.

Primarily these rocks would have been quartzose to arkosic psammopelites, with minor associated basic igneous and chemical rock types.

The Bowry Member rocks exposed in the southern and south-eastern sections of the grid differ markedly from the other rock units mapped. The rocks of this unit are more pyritic, are metasomatically altered and are geochemically distinct. Coincident Cu-Pb-Zn anomalies together with individual Cu, Pb and Zn anomalies help delineate this member. Cu anomalies ranging from 175 - 3200 ppm Cu, Pb anomalies ranging from 75 - 575 ppm Pb and Zn anomalies of the range 275 - 525 ppm Zn can be found within the Bowry Member. A marked localized increase in Fe content is closely associated with the anomalous Cu-Pb-Zn zones.

On the whole, stream sediment geochemistry was disappointing, with no significant results for the 30 samples assayed. Traces of gold and only low values for Cu-Pb-Zn were returned. Conversely panned concentrate samples have given five encouraging results with values between 0.179 ppm Au to 20.29 ppm Au having been returned. The gold in some of these samples may have come from weathering of the Bowry Member. However, a derivation from reworked Tertiary gravels appears more likely.

Geophysical data has proved of limited value. However the ironstone beds in the Bowry Member are obvious in the profiles crossing this unit. A south-easterly dip has been estimated for these beds from the magnetic data. Several magnetic zones correlate with geochemical anomalies.

Mineralization within the Lucy Creek Block is mainly confined to the Bowry Member of the Battys Bend Formation, situated in the south-eastern and southern portions of the grid. Here possibly exhalative chemical sediments and ironstones are associated with disseminated sulphide mineralization. These rocks have subsequently been metasomatically altered. Metasomatism is associated with very much younger granophyric intrusives.

5.0 DISCUSSION

Exploration results from the Lucy Creek Block have given little encouragement for gold exploration within most of this section of the Licence. Geochemical, geological and geophysical data has tended to increasingly direct exploration activities towards the Bowry Member. Known mineralization within or close to these units has been discussed previously and it is due to these known occurrences that the primary targets of volcanogenic exhalative or vein style gold mineralization within basic volcanics and ultra-basics; stratiform volcanogenic tungsten; Besshi-type Cu-Zn stratiform mafic volcanic massive sulphides and Au associated with major shear zones have been sought in EL 22/85.

Due to its regular linear nature and position between two markedly different sedimentary environments the Arthur Lineament can be interpreted as an epicontinental subsiding basin. Within its confines deepseated faults and high heat flow resulted in the extrusion of mafic volcanics and basics, and the exhalation of volcanogenic Fe (Savage River Resources Fe). The overall geological and tectonic setting resembles that of Besshi type Cu-Zn and volcanogenic tungsten deposits.

Recent microprobe research work by Davidson (1987), undertaken on a tourmaline rich sample at E.Z's request, has also opened up the possibility of Cleveland style Sn-W deposits as a target for exploration. Several samples were re-assayed for Sn and W by Analabs, Burnie. Both Sn and W contents were very low.

It is recommended that limited additional and infilling rock chip sampling be completed in areas with the most potential (Bowry member units in the southern and south-eastern sections of the grid).

6.0 EXPLORATION PROPOSED FOR 1987-88

Completion of geological mapping and sampling of the Lucy Creek Block.

Additional infilling rock chip sampling in the more prospective areas of the grid.

Target definition on the Lucy Creek Grid.

Review of previous exploration of the Badger Plains and Bronzite Hill Blocks of E.L. 22/85.

7.0 REFERENCES

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033

APPENDIX 1 - ROCK CHIP SAMPLES

03A

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR

LOCALITY: Lucy Creek Grid.

COLLECTED BY: N. FERGUSON

DATE: Jan. 1987.

Sample Number	A.M.G. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)									
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe Mn	Cr Ni	Al			
44756	382690	344658	RC	SCHIST, fg clvd schistose, patches of with pyrite.	Mgusch													
44759	379139	344877	RC	PHYLLITE, vfg, sideritic veining (intense) pyrite, chloritic	Mm phyll (py)						50	100	733	325	40.008			
44760	379133	344906	RC	SHALE, bk, vfg, pyritic	M bsh (py)						50		1100	75				
44761	379177	345016	RC	PHYLLITE, fg, tigmatic, highly sheared, veined, chloritic	Mm phyll						25	75	169	125	40.008			
44762	379226	345063	RC	PHYLLITE, vfg, gy, bk, clay rich, crenulated, finely laminated patches.	Mmq phyll						25	75	3.75	150	40.008			
44763	379239	345087	RC	PHYLLITE, fine grained, oxidized, clay rich, chloritic	M.f.m. phyll						225	525	12.30	325	40.008			
44764	379255	345146	RC	WACKE, vfg, clay rich, feldspathic oxidized phyllitic.	M/Volc.f.wacke						50		1650	100				
44765	379126	345223	RC	PHYLLITE, vfg, oxidized, clay mins rich vuggy laminated	Mq.phyll.						100	75	5.80	250	40.008			
44766	379075	345300	RC	WACKE, fine grained, feldspathic, clay rich, oxidized.	M/vwke						50		750	75				
44767	379005	345390	RC	PHYLLITE, fg, chloritic, feldspathic.	Mcb.f.phyll.						25	25	2.75	125	0.008			
44768	378995	345450	RC	PHYLLITE, vfg, partially oxidized, chloritic, rare zircons (debtal)	Mq.m.phyll.						25	75	8.10	125	40.008			
44769	378935	345640	RC	PHYLLITE, vfg, gy, bk, micaceous, laminated	Mm phyll						25		2.5	25				
44770	384850	348000	RG	PHYLLITE, fg, quartz rich, mar ht.	Mq.m.phyll.						5	25	15	2.65	65	35	40.008	
44771	384800	348000	RC	PHYLLITE, very fine grained, grey, micaceous	Mmq.phyll.						5	75	20	4.25	115	50	40.008	
44772	384680	348000	RG	PHYLLITE, fine grained, carbonate veining, feldspathic	Mm phyll						5	25	20	4.05	95	45	40.008	

855035

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR
COLLECTED BY: J. FERGUSON.

LOCALITY: WUSH CREEK GRID
DATE: FEB 1987.

035

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)									
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au.	
44773	384600	348000	RC	PHYLLITE, fine grained, oxidized, mic epid.	Mqzmpbyll.						45	75	15	2.55	90	85	30	<0.008
44774	384565	348000	Float	PHYLLITE, vfgained, oxidized, chloritic	Mmpbyll						15	<5	20	5.15	125	80	50	<0.008
44775	384510	348000	RC	PHYLLITE, oxidized, clay rich vfgained access bt & mgt.	Mmqzphyll						15	25	15	3.40	75	100	45	<0.008
44776	384425	348000	RC	SCHIST, silky gngy, fg, clvd, schistose.	Mchmsch.						5	<5	15	4.15	90	80	45	<0.008
44777	384330	348000	RC	SCHIST, gngy fg, chloritic, festaining qtz banding structures.	Mgusch.						<5	<5	20	2.20	50	75	40	<0.008
44778	384100	348000	RC	SCHIST, gngy, feldspathic, clvd.	Mmchl sch.						35	<5	30	2.95	460	105	65	<0.008
44779	384025	348000	RC	WACKE, fg massive, chloritic, feldspathic.	Mvwck						5	50	20	2.95	90	115	30	<0.008
44780	383835	348000	RG	SCHIST, gngy chloritic, micaceous, clvd fg.	Mgnsh.						35	<5	10	1.95	20	95	70	<0.008
44783	380974	346106	RC	PHYLLITE, fg, oxidized, manganese stains, clvd, granular patches	Mmqzphyll.						55	120		4.3		140		<0.008
44784	380904	346121	RC	PHYLLITE vfg laminated, crumulated, festained.	Mmpbyll.						10	35		4.4		135		<0.008
44785	380874	346144	RC	PHYLLITE, vfg, clvd, clay rich, festained	Mqmpbyll						20	25		2.55		70		<0.008
44786	380850	346418	RC	PHYLLITE, fg pyritic, crumulated, claved.	Mqmpbyll.	T	CMS	44792/	Pytic qmpbyll		<5			705		65		<0.008
44789	380904	346024	RC	CHERT, microcrystalline, massive, irregular carbonate veins.	Sch.	T	CMS	57591.	Pyritic Marble		5	60		1.80		5		<0.008
											<5			1200		25		

855036

036

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR.

LOCALITY: LUCY CREEK GRID

COLLECTED BY: MATHISON, D. GARDNER.

DATE: DEC 1986.

Sample Number	A.M.G. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)										
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Mg	Al		
53536	382020	347940	RC	SCHIST. fg, festining. minor qz veining	Mgnsch.						25	50	6.31	200	40.008				
											<25		100	75					
53537	382002	347940	RC	SCHIST. mg, pyritic cleaved	Mgnsch						400	50	13.38	175	0.017				
											<25		425	125					
53538	381996	347900	RC	BASALT fg, pink/green, carbonated.	Mbasalt						25	<25	4.16	100	<0.008				
											<25		125	425					
53539	381996	347942	RC	SCHIST. crenulated, contorted, pyritic, oxidized	Mgnsch.						450	<25	24.66	150	0.008				
											<25		250	75					
53540	381944	347944	RC	SCHIST. oxidized, fg, qz rich.	Mgnsch.						225	325	9.39	150	0.008				
											25		1025	75					
53541	381000	346225	RC	PHYLLITE. fg, micaceous, qz clasts in cleavage planes	M mphyll.						10	15	3.9	5	<0.008				
											10		40	20					
53542	381000	346060	RC	PHYLLITE. common phyllosilicates, silt to sand grade.	M mphyll.						25	125	3.5	45	<0.008				
											<5		3550	80					
53543	381000	345890	RC	WACKE. qtz and mica rich, festining. cleaned.	MS wck						55	70	2.1	65	<0.008				
											<5		85	65					
53544	381000	345580	RC	PHYLLITE, fg, chloritic, micaceous.	M mchl phyll						5	110	2.95	70	<0.008				
											<5		1.85	85					
53545	381000	345545	RC	SILTSTONE. fg, qtz/mica rich, chloritic. cleaned.	MS slst						5	30	2.7	45	<0.008				
											<5		30	45					
53546	381000	345420	RC	SCHIST. mg, cleaved, chloritic patches.	Mgnsch.						5	70	3.45	15	0.008				
											<5		4200	70					
53547	381000	345210	RC	SCHIST. mg, quartz and mica abundant, strong cleavage.	Mgnsch.						105	30	2.0	50	<0.008				
											<5		140	50					
53548	381000	345105	RC	SCHIST. silty sand grade, mica along cleavage planes. veining	Mgnsch						85	35	4.5	20	0.050				
											<5		250	30					
53549	381000	346000	RC	SCHIST. g.y.g.n, minor qz, chloritic.	Mgnsch						10	95	2.75	45	<0.008				
											<5		250	65					
53550	381150	345203	RC	SCHIST. f-mg, clud, schistose, oxidized chloritic patches	M f.m.sch.	T	CMS	44793/	Feldt/mg.phyll.		20	90	6.25	20	0.025				
											175		740	65					

855037

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR WINEAMENT LOCALITY: LUCY CREEK GRID.
COLLECTED BY: D. GARDNER. DATE: FEB 87

Sample Number	A.M.G. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)								
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au.	
53566	385000	344810	RC	SCHIST fg chloritic, clvd, schistose, micaceous.	Mmg sch (chloritic)					145	270	8.3	125	<0.008				
53567	385000	344840	RC	PIGNEOUS ROCK. highly wttd, conspicuous well dev. mag xtals, feldspar, chloritic.	M basalt?					<5		3200	95					
53568	385000	345235	Float	SILTSTONE. feldspathic, chloritic, little quartz + mag	MSfwcke.					275	250	12.0	70	<0.008				
53569	385000	345250	RC	?BASALT. or red, lrg feldspar xtals mod foliation, some mica	Mbasalt.					<5		1350	100					
53570	385000	345240	Float	SCHIST fg chloritic micaceous schistose clvd. + feld.	M chlmsch.					260	55	8.45	110	<0.008				
53571	385000	345630	RC	SCHIST fg siliceous, chloritic, elongate feldspars, clvd. qty veining.	Mgnsch.					25		90	60					
53572	385000	345710	RC	VOLCANIC WACKE, siltgrade, feldspathic no qty, mnr chlorite alterat= clvd.	Mwcke					325	170	13.0	50	0.008				
53573	385000	345620	Float	Sediment sample from creek. 90-95% qz 2-5% chloritic schist.						295		130	50					
53574	385000	345035	RC	SCHIST. very wttd, mnr chlorite micaceous very schistose	Msch.					15	50	3.6	160	<0.008				
53575	385000	345745	RC	SCHIST chloritic, siliceous, very micaceous milky qty clasts	Mmsch.					<5		265	45					
53576	385000	346060	Float	SCHIST. fg, clvd, chloritic, little silica	Mgnsch.					105	305	10.5	80	0.008				
53578	385000	346120	RC	SCHIST very wttd chloritic quartz, micaceous. qty clasts. clvd.	Mamsch (chloritic)					<5		4250	155					
53579	385000	347080	Float	SCHIST gy micaceous.	Mmsch.					195	105	10.25	150	<0.008				
53580	385000	347140	RC	SCHIST gy micaceous, not chloritic little qz.	Mmsch.					<5		1800	95					
53581	385000	347810	Float	QUARTZITE milky quartz (vein)	Quartzite.					160	45	4.7	150	0.008				
										<5		125	55					
										15	130	4.85	150	<0.008				
										<5		320	100					
										55	175	7.15	220	0.008				
										<5		125	125					
										85	135	8.15	185	<0.008				
										<5		215	110					
										10	10	.97	90	<0.008				
										<5		10	30					
										5	10	1.23	80	<0.008				
										<5		15	20					
										10	10	.79	75	<0.008				
										<5		35	30					

037

053038

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR LINEAMENT LOCALITY: LUCY CREEK GRID.
COLLECTED BY: D.GARDNER. DATE: FEB 8 1938

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)								
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Ca	Ni	Au.	
53582	385000	346980	RC	PHYLLITE yellow, micaceous, feldspathic little qz vfg.	Mmphyll					10	10	2-3	115	40-008				
53583	385000	346450	Float	SCHIST. fg grey micaceous clud	Mmsch.					5	10	10	170	40-008				
53584	385000	346045	RC	SCHIST. fg chloritic, micaceous, schistose	Mchlmsch.					190	255	7-65	170	40-008				
53587	384840	343803	RC	SCHIST. gy mg micaceous clud qtz clasts in cleavage? boudins	Mmsch.					35	125	3-95	180	40-008				
53588	384735	343930	RC	SCHIST, micaceous, siliceous, chloritic qz veining	Mgmsch.					20	80	2-3	90	40-008				
53591	384619	344068	RC	VOLCANIC chloritic, feldspathic, siliceous.	Mvolwacke.					195	340	12-00	70	40-008				
										25		2250	100					

855039

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR.

LOCALITY: LUCH CREEK GRID.

COLLECTED BY: I. MATHISON, S. TAYLOR.

DATE: DEC 1956.

Sample Number	A.M.G. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)							
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Ca	Ni	Al
58141	L383	344-600	RC	METAVOLCANIC WACKE, gangly, veined, basic, oxidized	Mrvk						85	50	2.45	80	0.017		
58142	381360	345265	RC	GREENSCHIST, fg, grey, schistose, oxidized	Mgnsh						15		350	50			
58143	381665	345300	RC	GREENSCHIST, fg, grey green, layered, oxidized	Mgnsh						10	70	2.85	165	40.008		
58144	381780	345150	RC	VOLCANIC WACKE, fg, grey green, layered, qz veinlets	Vfswk (basic)						80	125	3.60	130	40.008		
58145	381720	345040	RC	GRANULAR GREENSTONE, fg, grey green, oxidized	Mgnst (gnr)						55		1050	110			
58146	381335	344565	RC	GREENSCHIST, gangly, amphib and chl dominant	Mgnsh	T	CMS		Metabasic		80	60	4.30	185	40.008		
58147	381220	344090	RC	VOLCANIC WACKE, fg, grey green, oxidized, schistose, sericitic	Vfswk (basic)						65		325	95			
58148	382115	343870	RC	VOLCANIC WACKE, fg, grey green, sericitic, slightly schistose	Vserwk (basic)						180	90	5.10	130	40.008		
58149	382560	343855	RC	VOLCANIC WACKE, fg, grey green, slight schistosity, oxidized, minor ep	Vwk (basic)						105		740	75			
58150	343080	344070	RC	GREENSTONE, dk gangly, massive, minor chl	Mgnst.						55	90	6.30	165	40.008		
58151	383380	344120	RC	VOLCANIC WACKE, gangly, chloritic, slight schistosity	Vchlwk (basic)						40		250	90			
58152	383380	344110	RC	VOLCANIC WACKE, green, gangly, massive, qz veining	Vchlwk (basic)	T	CMS		Al-m-ep Phy		95	145	4.50	90	40.008		
58153	383810	344180	RC	GREENSTONE, f-mg, minor chl schist bands	Mgnst.						90		1050	60			
58154	384025	344210	RC	BASALT, gangly, massive	MBV.	T	CMS		Metabasic		20	160	4.25	140	40.008		
											120		570	95			
											120	240	9.90	50	40.008		
											80		1550	75			
											20	100	3.00	100	40.008		
											25		645	60			
											15	120	3.90	130	40.008		
											50		305	80			
											30	240	4.15	120	40.008		
											20		1200	80			
											360	510	11.90	40	0.017		
											120		2300	75			

039

855040

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR
COLLECTED BY: IMATHISON

LOCALITY: KUCH CREEK GRID
DATE: DEC 1986

040

855041

Sample Number	A.M.G. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)						
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe Mn	Cr Ni	Au	
58155	344060	384240	RC	GREENSTONE ggn, schistose, clvd, mncqz veining	Mgnst.	T	CMS	Green	Al-m-Phy	15	45	145	4.75	130	80	10.008
58156	343835	384205	RC	METABASALT. fg-mg, gngy, veined, epidote	MBV	T	CMS		Microgabbro	100	30	180	9.50	175	110	10.008
58157	343590	384120	RC	AMPHIBOLITE. gngy gngn, fine gngn, vngy chloritized	MPhyll.	T	CMS		Mica-Phy	60	75	100	3.40	115	70	10.008
58158	343045	383960	RC	METABASALT. gngy gngy, fg, veined, slight schistosity	MBV					30	5	105	2.70	215	80	10.008
58159	385135	343575	RC	METABASALT. gngy, fine grained, slight schistosity	MBV	T	CMS		Act-ep-qzPhy	180	30	140	9.20	70	80	10.008
58160	385135	343650	RC	GREENSCHIST. fine grained, gngy veined	Mgnsh					70	55	100	4.55	165	70	10.008
58161	385720	343045	RC	VOLCANIC WACKE. fg, slight schistosity, gngn, mnc ep	Vfswk (basic)	T	CMS		Metabasic	180	40	165	9.70	80	70	10.008
58164	387105	344805	RC	GREENSTONE md-coarse, weak clvg, granular	Mgnst					90	30	275	9.80	90	80	10.008
58167	385821	344182	RC	GREENSTONE massive, med grained, minor cleavage	Mgnst					240	30	160	9.10	55	65	0.025
58168	383837	344390	RC	GREENSTONE blgn, mg, chloritic qz veining	Mgnst					15	15	85	3.90	120	60	10.008
58169	383760	344441	RC	SCHIST gng feldspathic, festined, clvd	Mgnsch					20	10	100	3.35	130	70	10.008
58172	383672	344504	RC	GREENSTONE mg, gng, weak clvg, mnc qz epi veins	Mgnst					100	25	100	6.76	200	75	10.008
58173	383586	344547	RC	GREENSTONE thinly bed, mnc, dissem py, schistose in places	Mgnst					50	100	325	5.86	225	75	10.008
58174	383433	344562	RC	GREENSTONE, plk cm, wht, qz veined, layered	Mgnst					50	225	50	2.27	100	25	10.008
58175	383243	344506	RC	GREENSTONE layered, mg, limonite pseudomorphs	Mgnst					125	225	100	5.88	175	50	10.008

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR

LOCALITY: WICK CREEK GRID.

COLLECTED BY: I. MATHISON

DATE: DEC 1986

041

855042

Sample Number	A.M.G. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)							
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni
58178	383242	344596	RL	GREENSTONE gn pk, massive gnrlar mnr qz veining.	Mgnst				25	100	606	200	4000B			
58179	383359	344648	RL	GREENSCHIST whtd micaceous chloritic schistose chd. qz veining.	Mgnsch.				25	75	401	300	4000B			
58180	385684	344114	RL	GREENSTONE dk gn fg	Mgnst.				150	125	10.93	125	4000B			
58181	385740	344235	RL	GREENSTONE fg compact dk gn weakly chd.	Mgnst				200	100	11.17	125	4000B			
58184	386000	345195	RL	GREENSCHIST mg granular chd.	Mgnsch.				75	100	5.54	125	4000B			
58185	385818	345010	RL	GREENSCHIST dk gn, lineated, mnr amph, mnr pg.	Mgnsch.				50	75	5.68	200	0.008			
58188	385809	344888	RL	GREENSCHIST poorly dev banding, wht xbls, festaining, qz veining.	Mgnsch.				25		875	75				
58189	385673	344648	RL	GREENSCHIST foliated, lineated, granular, qz veining.	Mgnsch.				25	25	2.92	200	4000B			
58190	383587	348898	Float	IRONSTONE vein qz, schistose	Mfest.				3200	260	31.90	80	4000B			
58191	383547	348849	RL	GREENSCHIST magnetitic, clay vugs	Mgnsch.				65		130	35				
58192	383522	348820	RL	IRONSTONE massive, rd bn, chd.	Mfest.				275	175	62.90	10	4000B			
58193	383525	348747	RL	GREENSCHIST cm gn, 10% py, foliated,	Mgnsch.				20		200	705				
58194	383509	348493	RL	GREENSCHIST gn, foliated, vein qz, ht	Mgnsch.				60	50	8.40	90	4000B			
58195	383534	348347	RL	WACKE. plagy, chd, foliated micaceous.	Sqfwacke				10	20	0.20	90	4000B			
									10		5	15				

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR

LOCALITY: LUCH CREEK, TAS. ⁰¹⁷

COLLECTED BY: NFERGUSON, I MATHISON.

DATE: DEC 1968

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)										
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au		
64371	380000	347800	RC	PHYLLITE, vfg wht cm, predominantly	Mq phyll					<5	<5	10	0.26	<5	65	15	<0.008		
64376	382064	347885	RC	PELITE, vfg, gy, pred siliceous, mnr ht.	Mch pel.					5	<5	15	1.10	30	20	10	<0.008		
64377	381000	347260	RC	PHYLLITE wht, decomposed & highly whtd	M phyll					25	<25	<25	0.59	150	<0.008				
64378	381000	347185	RC	SLATE bk graphitic, pyritic	Ms (pyritic)					25	50	<25	2.06	100	<0.008				
64379	381000	347025	RC	GREENSTONE ox, f-stained, feldspathic	Mgust.					125	275	<25	14.63	200	0.025				
64380	380990	346960	RC	GREENSTONE, ox, vfg, mnr vugs, ?py	Mgust					175	75	<25	9.68	175	<0.008				
64381	381000	346900	RC	IRONSTONE gn bk, magnetitic, coarse py	M fest	T	CMS		Act-tar	50	50	<25	8.31	75	<0.008				
64382	381000	346890	RC	IRONSTONE ox gossanous, mnr py	M fest.					1025	25	25	4.960	150	0.008				
64383	381000	346740	RC	QUARTZPHYRIC ROCK, wht bk, carbonated, siliceous, magnesian	AI qz phy					75	25	<25	7.30	50	<0.008				
64384	380980	346660	RC	SILTSTONE, carbonated, siliceous, vuggy	Sq slst.	T	CMS		Sev-qz.	450	25	<25	10.99	175	0.008				
64385	381000	346390	RC	PHYLLITE, gn, micaceous chertitic	M m phyll					50	<25	50	2.25	125	<0.008				
64386	381000	346225	RC	SCHIST, wht bleached, decomp, micaceous	M msch					25	<25	25	0.78	75	<0.008				
64387	385020	346000	RC	PHYLLITE, mg, gngn, siliceous and micaceous.	M q m phyll					110	70	<5	3.95	80	0.008				
64388	385140	346000	RC	PHYLLITE, fg oxidized, claymins abundant	M m q phyll					140	135	<5	7.4	120	<0.008				
64389	385480	346000	RC	BASALT fg, bn, or gn, feldspathic little qz, abundant Fe oxides.	MBV.					10	70	<5	3.45	50	<0.008				

855043

043

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT:

LOCALITY:

COLLECTED BY:

DATE:

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)										
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au.		
64390	385600	346000	RC	PHYLLITE, gngy, vfg, foliated, mnr feldspar, chl.	Mmphyll.					20	130	405	55	<0.008					
										<5		2500	90						
64391	385948	346000	Float	BASALT. fg, orb, feldspathic, chloritic.	MBV					705	120	1100	20	0.017					
										100		500	60						
64392	386420	346000	RC	ORTHOQUARTZITE. wht, mdgn, predom qz, mnr clay mins.	Sqz.					5	10	0.39	5	0.017					
										<5		35	25						
64393	390000	347500	Float	PHYLLITE. gngy vfg oxidized, lgly phyllosilicates.	Mmqphyll					<5	10	050	15	<0.008					
										<5		20	20						
64394	390000	347665	Float	PHYLLITE. fg, gn, felds altered to clay mins + qz.	Mmqphyll					5	15	265	45	<0.008					
										<5		80	55						
64395	390000	347710	RC	PHYLLITE. gn wht, vfg, oxidized, qz clasts (bordered)	Mmqphyll.					<5	20	38	35	<0.008					
										<5		110	60						

855044

14

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR

LOCALITY: LUXY CREEK GRID.

COLLECTED BY: EZ EXPLORATION.

DATE: DEC 1986.

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)							
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au
65869	382115	347852	RC	PHYLITE. bn, fg, oxidized. qz. mi dominant. vuggy. feldspathic	Mfgmphyll.					55	<5	60	3.15	520	140	45	<0.008
65870	384994	343620	RC	PHYLITE gy, fg, oxidized, mnr chl, ht and feldspar.	Mqmphyll.					20	<5	55	2.30	555	90	35	<0.008
65871	384947	343660	RC	WACKE, vfg, gangy, veined, chloritic, feldspathic mnr ht, qz. mi.	Mv.wacke (feldspathic)					140	<5	95	6.10	765	205	90	0.010
65872	384815	343860	RC	PHYLITE, vfg, gngy, micaceous feldspathic.	Mmgphyll.					15	25	95	3.15	345	160	60	<0.008
65875	384270	347960	RC	BASALT. fg, plgy, chlorite feldspar mineralogy, Fe oxides. little qz	MBV.					5	<5	10	1.80	60	60	25	<0.008
65880	384976	348729	RC	SCHIST bn-gngy, micaceous, clvd, schistose.	Mmsch.												
65881	385000	348640.	RC	PHYLITE bn/bkgn, fg, oxidized, quartz/mica dominant. chloritized.	Mqmphyll					55	<5	45	3.75	2450	120	40	<0.008

855045

201

Electrolytic Zinc Co. of A'asia Ltd. Rosebery, Tas.			ROCK SAMPLE LEDGER						PROJECT: ARTHUR		LOCALITY: LUCY CREEK GR.							
									COLLECTED BY: NFERGUSON		DATE: DEC 1986							
Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)									
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au	
67070	380967	347795	RC								30	<5	45	190	70	55	25	<0.008
67071	381204	347782	RC	PHYLITE gybk, fg.							10	<5	20	100	25	80	15	<0.008
67072	381383	347755	RC	IGNEOUS/INTRUSIVE. wht gy. fg, xballine unaltered. porphyrite, little quartz.	AVI gphyre	T	CMS			Granophyre.	15	175	50	160	100	70	20	<0.008
67075	381464	347728	RC	PHYLITE ox-orbn, fg oxidized, mnr ht and Fe oxides.	Mq mphyll	T	CMS	57576		Pelite (carbonis)	35	<5	15	150	40	65	30	<0.008
67076	381523	347720	RC	PHYLITE. blgn fg predominantly qz-mn mineralogy.	Mm qphyll						35	<5	75	223	220	80	40	<0.030
67077	383000	347440	RC								25		40	32		140		<0.008
67078	383000	347545	RC								<5			40		55		
67079	383000	347580	RC								75	30	28		135			<0.008
67079	383000	347580	RC								<5			25		50		
67080	382930	348000	RC								45	15	155		75			<0.008
67080	382930	348000	RC								<5			100		25		
67081	383090	348000	RC								10	10	10		120			<0.008
67081	383090	348000	RC								<5			<5		15		
67081	383090	348000	RC								70	30	5.1		140			<0.008
67081	383090	348000	RC								<5			75		40		
67082	380000	345940	RC								20	395	10.5		55			<0.008
67082	380000	345940	RC								<5			820		45		
6708B	380000	345640	RG								35	210	7.9		100			<0.008
6708B	380000	345640	RG								<5			245		100		
67084	380000	345615	RC								15	5	.97		15			<0.008
67084	380000	345615	RC								<5			30		25		

855046

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR
COLLECTED BY: N. FERGUSON.

LOCALITY: WUCH CREEK GRID.
DATE: DEC 1986.

017

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)							
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Ca	Pb	Zn	Fe	Mn	Co	Ni	Al
68201	L 386	347720	DUMP (tunnel)	QUARTZITE white, fine grained, slight schistosity qtz m	Mqzt					5	65	0.20	15	40.00B			
68202	L 386	347650	R.C.	GREENSCHIST. bgy, schistose, micaceous, silicified	Mgnsh					15	55	1.95	170	40.00B			
68203	L 386	347615E	R.C.	GREENSCHIST gngy, linedated, clvd.	Mgnsh	T	CMS		Mqzmsh	15	30	2.05	150	40.00B			
68204	L 386	347550	R.C.	GREENSTONE gngy, cleaved, iron stained, minor magnetite and chromite	Mgnst(mt)					135	115	5.85	180	40.00B			
68205	L 386	347260	R.C.	GREENSCHIST. gngy, clvd, iron stained, fine grained.	Mgnsh					10	80	1.45	175	40.00B			
68206	L 387	346755	R.C.	GREENSCHIST. gngy, fine grained, linedated iron stained quartz porphyroblasts	Mgnsh.	T	CMS		Mchqzmsh	5	20	2.05	105	0.00B			
68207	L 387	347465	R.C.	GREENSTONE. svgy, cleaved, pred. chlorite, iron stained, poss magnetite	Mgnst(mt)					15	30	3.90	95	40.00B			
68208	L 387	347420	R.C.	GREENSCHIST. gngy, linedated, cleaved, minor haematite	Mgnsh(ht)	T	CMS		Mphyl	25	45	2.80	110	40.00B			
68209	L 387	346320	Float	GREENSTONE. gngy, fine grained, linedated, iron stained, quartz veined	Mgnst	T	CMS		Mphyl	5	150	2.95	370	0.00B			
68210	L 387025	347740	R.C.	METABASALT. gngy, fine grained, clvd, iron stained, lineations	MBV	T	CMS		Mmqzphy	10	30	3.45	100	40.00B			
68211	L 384	344265	Float	METABASALT. gy bk, slightly schistose, slightly magnetic, minor amphibole	MBV	T	CMS		Mqzmphy	50	100	3.00	145	0.00B			
68212	L 384	344295	R.C.	METABASALT. svgy, fine grained, red chlorite, mica, minor amp. gut.	MBV	T	CMS		Mqzmphy	60	95	5.50	180	40.00B			
68213	L 384	344350	R.C.	GREENSCHIST. gngy, fine grained, linedated, clvd, minor haematite	Mgnsh	T	CMS		Mmphy	10	100	3.45	165	40.00B			
68214	L 384	345165	Float	QUARTZSCHIST. cmwh, schistose, clvd, red, quartz, mica, minor cr, zircon	Mqzsh	T	CMS		Mqzmphy	10	30	0.95	10	40.00B			
68215	L 384	345175	R.C.	MICASCHIST. cmgywh, fine grained, clvd, mnr amp, bte & mt.	Mmsh	T	CMS		Mmqzphy	10	40	1.00	15	40.00B			

855048

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR.

LOCALITY: WULY CREEK GRID

COLLECTED BY: N FERGUSON.

DATE: DEC 1936.

018

855049

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)									
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe Mn	Cr	Ni	Al		
68216	L384	345495	Float	METASAND, gnl bl fine grained vuggy d/d, limbed, mnr cr.	MISV	T	CMS		chl-al-qz	30	165	735	90	1000B				
68217	L384	345635	R.C.	GREENSCHIST, gngy cleaved, iron stained, carbonated	Mgnsh					65	220	645	715	1000B				
68218	L384	345732	R.C.	GREENSTONE, gngy iron stained vave of quartz porphyroblasts and muscovite	Mgnst					450	130	505	200	1000B				
68219	L384	345800	Float	GREENSTONE, orb n oxidized, d/d, iron stained	Mgnst					145	80	410	215	1000B				
68220	L382	343835	R.C.	GREENSCHIST, gngy iron stained d/d, qz porphyroblasts	Mgnsh					60	115	555	255	1000B				
68221	L382	343995	Float	GREENSCHIST, gngy oxidized orb n iron stained	Mgnsh					75	60	345	165	1000B				
68222	L382	344315	R.C.	GREENSCHIST, gngy bl, cleaved, clay rich	Mgnsh													
68223	L382	344320	R.C.	GREENSCHIST, gngy oxidized orb n iron stained minor magnetite & cr.	Mgnsh					100	25	647	200	1000B				
68224	L382	344670	R.C.	QUARTZSCHIST, gngy fine grained iron stained	Mqzsh	T	CMS		Mmqzsh	50	225	170	175	1000B				
68225	L382	344670	R.C.	QUARTZSCHIST, gngy d/d fine grained	Mqzsh	T	CMS		Mqzmsch	50	225	175	175	1000B				
68226	L382	344670	R.C.	SILTSTONE, gngy silt grade pred clay minerals, schistose	MS silt	T	CMS		Mqz phyl	50	150	889	275	0.008				
68228	L387	345110	R.C.	SILTSTONE, gngy silt grade minor chromite/magnetite	MS silt					25	25	614	150	0.033				
68229	L383	344880	R.C.	GREENSTONE, gngy bl, fine grained, d/d iron stained.	Mgnst					50	25	376	225	1000B				
68230	L383	344865	R.C.	GREENSCHIST, gngy oxidized orb n mg. iron stained & vave of porphyroblasts	Mgnsh					50	25	394	275	1000B				
68231	L383	344732	R.C.	GREENSCHIST, oxidized orb n fg sd	Mgnsh					225		200	50					

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR.
COLLECTED BY: N. FERGUSON.

LOCALITY: LUCY CREEK GR. 10
DATE: DEC. 1956.

049

855030

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)					
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Zn	Fe	Cr	Ni	Al
										Pb	Mn				
68232	L383	344605	R.C.	GREENSCHIST mg oxidized or-bn mod at plblasts iron staining dominant.	Mgnsh					150	100	6.7	225	40.008	
										25		235	75		
68233	L383	344355	R.C.	GREENSCHIST mg oxidized or-bn iron stained clud	Mgnsh					75	50	5.16	200	40.008	
										225		175	75		
68234	L383	344300-200	Float	QUARTZSCHIST. mg or wh strongly clud	Mqzsh					25	100	5.32	200	40.008	
										25		500	100		
68235	L383	344300-200	Float	QUARTZSCHIST. mg or white strongly cleaved	Mqzsh					150	100	6.02	175	0.022	
										225		325	75		
68236	L383	344300-200	Float	QUARTZSCHIST. mg clud iron stained.	Mqzsh					175	75	6.43	325	40.008	
										225		125	100		
68237	L383	344300-200	Float	QUARTZSCHIST. mg clud iron stained clay rich	Mqzsh					125	75	6.23	200	40.008	
										225		275	100		
68240	L384	345810	R.C.	GREENSCHIST mg clud clay rich amphibole, chromite, magnetite.	Mgnsh					135	55	4.05	190	40.008	
										25		20	65		
68241	L384	345865	R.C.	GREENSCHIST. mg oxidized or-bn schistose	Mgnsh					100	190	5.85	170	40.008	
										15		195	65		
68242	L384	345865	R.C.	GREENSCHIST. mg iron stain lenticles	Mgnsh	T				55	150	1.90	140	40.008	
										20		50	70		
68243	L384	346143	R.C.	QUARTZSCHIST. mg abid iron stained ht, amp lenticled	Mqzsh					60	45	2.95	170	0.008	
										15		30	50		
68244	L384	346185	R.C.	QUARTZSCHIST. mg banded, lenticled chromite	Mqzsh					50	40	7.50	155	0.008	
										20		140	45		
68245	L384	346160E	R.C.	GREENSTONE. fg or-bn lenticled vuggy, rare ht, cr.	Mgnst					65	115	3.55	155	40.008	
										20		140	90		
68246	L383	344983	R.C.	GREENSTONE. mg rare qz porphy. roblasts, chromite	Mgnst					90	135	5.05	160	40.008	
										20		275	80		
68247	L383	345225	R.C.	GREENSCHIST mg lenticled, clud. clay rich	Mabmsh					30	40	4.75	175	40.008	
										15		100	45		
68248	L383	345400	Float	QUARTZITE iron stained ht3 mt	Sqzt					10	5	1.20	20	40.008	
										5		30	15		

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR

LOCALITY: LUCH CREEK GRAP

COLLECTED BY: N. FERGUSON

DATE: DEC 1986

853051

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)								
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Au	
68249	L383	345550	R.C.	GREENSCHIST. mg ggn viewed amp. cr. ht. rare qz porphyroblasts	Mgnsh	T	CMS		M phyll (spotted)	45	85	3.25	145	40008				
68250	L383	345600	R.C.	GREENSTONE. mg oxidised or bn mac amp. cr.	Mgnst					30	20	2.25	135	40008				
68251	L388	349211	R.C.	WACKE. fg tn bdd sheaved ht lenticles iron oxides	Sywk. chl basic					50	90	5.15	130	40008				
68252	L388	349190	Float	GREENSTONE. fg gubd iron stains lenticled	Mgnst.	T	CMS		Mqzm phyll	30	60	2.75	90	40008				
68253	L388	349035	R.C.	ARENITE. wh/cem, mnr iron stains pred. az. acces. ht.	Sgar.					45	10	0.09	50	40008				
68254	L388	348915	R.C.	GREENSCHIST. fg blgn, clud sheaved. iron stained, mnr cr.	Mgnsh					55	60	3.35	145	40008				
68255	L388	348880	R.C.	GREENSTONE. ox or bn cleaved tk bdd	Mgnst.	T	CMS		Qz-al-carb- m.	15	65	2.40	110	40008				
68256	L388	348855	R.C.	QUARTZITE. milky quartz, vrn mnr ht.	Sqzt.					20	25	1.00	70	40008				
68257	L388	348810	R.C.	GREENSTONE. ggn fg lenticled clud tn bdd mnr ht.	Mgnst.					45	20	1.10	105	40008				
68258	L388	348610	R.C.	GREENSCHIST. plgn, fg, clud, v tn bdd lenticled.	Mgnsh.	T	CMS		M mqz phyl	5	35	2.30	110	40008				
68259	L388	348390	Float	GREENSTONE, wh tn bdd fg pyritic lenticled	Mgnst (p)	T	CMS		Mqzm phyll	40	10	1.05	50	0.008				
68260	L387	348767	R.C.	GREENSTONE. fg blgnay tn bdd mnr atz porphyroblasts, ht, mt.	Mgnst.	T	CMS		M phyll	15	40	3.90	180	40008				
68261	L387	348625	R.C.	QUARTZSCHIST. mg white tn bdd vuggy mnr ht, cr. lenticled.	Mqzsh	T	CMS		Microgness	15	15	1.5	1.5	1.5				
68262	388390	348655	Float	QUARTZSCHIST. white tn bdd vuggy lenticled, porous.	Mqzsh					10	10	0.85	70	40008				
68263	388450	348730	R.C.	GREENSCHIST. fg tn bdd sheaved. mac ht, cr	Mgnsh	T	CMS		Mmqz phyl	45	30	3.35	95	40008				

853051

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR
COLLECTED BY: N. FERGUSON

LOCALITY: WUCHY CREEK GRID
DATE: DEC 1986

011

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)						
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Cr	Ni
68264	388740	349000	R.C.	GREENSTONE. fg, tn bdd oxidized orbn, lined, mic amp	Mgnst (fmp)				45	10	150	105	2000		
68265	L389	349430	R.C.	GREENSCHIST. mg wh iron stained mnr ht.	Mgnsh				15	40	255	50	2000		
68266	L389	349280	Float	GREENSCHIST. fg, gublay, tn bdd mnr ht, cr amp. limonitic.	Mgnsh.	T			140	30	825	90	2000		
68267	L389	349225	Float	GREENSCHIST. fg, tn bdd blsv mnr ht sheared	Mgnsh.				45	40	300	90	2000		
68268	L383	345600	R.C.	GREENSCHIST. mg, tn bdd, gangy, mnr carbonized, mnr mt cr.	Mgnsh				40	20	415	175	2000		
68269	L383	345850	R.C.	GREENSTONE. mg, gangy, oxidized or-bn, tn bdd, clay rich.	Mgnst.				35	40	310	150	2000		
68270	L383	346110	R.C.	QUARTZSCHIST. mg wh clud vuggy tn bdd	Mqzsh.				5	20	105	110	2000		
68272	382720	344200	R.C.	GREENSCHIST. mg, gangy bl, or orbn tn bdd, qz porphyrobls.	Mgnsh.				120	115	400	120	2000		
68275	385760	344345	R.C.	GREENSTONE. f-mg gangy, mnr qz mnr iron staining, cr bld tn bdd	Mgnst.				20	80	370	130	2000		
68279	385660	344535	R.C.	GREENSTONE. m-fg gangy iron stained sid, vuggy	Mgnst.				20	60	210	90	2000		
68280	L382	344920	R.C.	GREENSTONE. gangy, fg, cbz, tn bdd mnr cr	Mgnst				800	25	560	225	2000		
68281	L382	345220	R.C.	GREENSCHIST. f-mg, plgn, tn bdd highly withd	Mgnsh				225	225	75				
68282	L382	345870	R.C.	QUARTZSCHIST. orbn, lined, mg tn bdd,	Mqzsh				175	25	450	150	0.017		
68283	L383	346245	R.C.	GREENSCHIST gangy, f-mg, lined iron stained,	Mgnsh				25	25	325	50			
68284	L383	346410	Float	SILTSTONE. vfg, gubn, gr bdd, slightly schistose	VSslst.				50	225	75	2000			
									25	225	537	125	2000		
									225	50	75				

825052

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR
COLLECTED BY: N FERGUSON.

LOCALITY: WYCH CREEK GRID
DATE: DEC 1936.

052

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)								
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Fe	Mn	Cr	Ni	Al
68285	L383	346480	RC.	QUARTZSCHIST. mg oxidized with porous, friable, equigranular.	Mqzsh.				25	25	0.70	75	10.008				
									25		25	25					
68286	L383	346560	RC.	GREENSCHIST. fg, gubk, tn bedd, iron stained, alternating beds.	Mgnsh.				50	25	5.26	125	10.008				
									25		125	50					
68287	L383	346685	RC.	GREENSCHIST. fg, gngy, tn bedd, clay rich, alternating beds.	Mgnsh.				25	25	3.03	100	10.008				
									25		25	25					
68288	L386	345580	RC.	GREENSCHIST. mg, gm, mn, iron staining, mn az porph blasts.	Mgnsh.				75	125	5.46	200	0.008				
									25		175	75					
68289	L386	345380	RC.	GREENSCHIST. gm, fine grained.	Mgnsh.				50	125	5.84	225	10.008				
									25		575	75					
68290	L387	344488	RC.	QUARTZITE. subbk limonitic quartz gravel, s'd matrix fe rich	Sqzt.				125	100	4.56	75	10.008				
									50		675	25					
68291	L385	343815	Float	GREENSCHIST. gngy, fg, carbonized patches, clvd, iron staining.	Mgnsh.				100	75	5.06	200	10.008				
									25		1000	75					
68294	380970	347750	RC.	PHYLLITE. fg, gy laminated, pred. az mn mica tn bedded.	Mphy				25	25	2.00	75	10.008				
									25		25	25					
68295	380875	347770	RC.	PHYLLITE. fg, gubk, laminated, schistose.	Mphy				25	25	1.79	200	0.017				
									25		25	50					
68298	380420	347750	RC.	PHYLLITE. vfg, gy bk, schistose, laminated.	Mphy				25	25	1.94	75	10.008				
									25		25	25					

855053

053

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

ROCK SAMPLE LEDGER

PROJECT: ARTHUR
COLLECTED BY: MAT, NF

LOCALITY: LUCY GRID
DATE: APR-MAY 1987

Sample Number	A.M.G.Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)							
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Zn	Fe % Mn	Au.				
58255			WASH	GRAVEL, part consolidated, peaty basal wash - old u/g wkgs.	Tus					30	10	1.35	9.33				
58256			WASH	As above	Tus					5		45					
58257			RC	SANDSTONE, silty, pale cream, oxidized, vague cluge, bedrock to above	SST					10	15	1.50	0.008				
64396	382N	347640E	Float	IRONSTONE, banded, grey green granular, labels ox. py chloritic	Fe					400	60	27.50	0.017				
64397	382	347445	Float	IRONSTONE - haematite plus magnetite	Fe.					20		540					
64398	3			GREENSCHIST, green-silty grey chlorite-mica, quartz, banded	M gn sh					95	65	62.50	<0.008				
64399				GREENSCHIST, pyritic, banded, chlorite-mica, K.Fs. vng	M gn sh					20		230					
64400				SILTSTONE, silicified, tr. mica, pyritic patches, banded	M slst					10	70	5.05	<0.008				
65884				GRANOPHYRE, porphyritic in quartz, white Fs, mag-hc - 9x vng	AT					10		1150					
65885				PHYLLITE, pale grey 15% pyrite 9x to 2cm, thin banded	M phyll					10	30	4.35	<0.008				
65886				PHYLLITE, dark green grey quartz - mica - tr pyrite, mag Fs	M phyll					5		45					
										15	15	1.55	<0.008				
										10		135					
										25	10	1.20	<0.008				
										<1		85					
										50	140	13.00	<0.008				
										20		1850					
										75	1250	9.65	<0.008				
										170		3350					

855054

APPENDIX 2 - OTHER GEOCHEMISTRY

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ARTHUR LINEAMENT.
LOCALITY: EL. 23/85.....
GRID NAME: LUCH. CREEK.....
NOMINAL GRID AZIMUTH: AMS.....

MATERIAL: PANNELED CONCENTRATES.
SAMPLE METHOD: SIEVED to 75µm then reduced
SAMPLED BY: E.Z. EXPLORATION.. X3
DATE: NOV 20. - APR. 87....

SIZE FRACTION ANALYSED: ...80#.....
ANALYSED BY: ANALABS. BORNIE.
METHOD: Au. by FIREASSAY. & AAS.

SAMPLE NUMBER	SAMPLE LOCATION DATA				STREAM DATA				COMPOSITION DATA				Geology	METAL CONTENT (ppm unless specified)							
	GRID LINE: NO.		A.M.G. CO-ORDINATES		Silt Order Direction of Flow	Width	Active	Clay Silt	Sand	Rock Frag.	Organic	CONTAM.		Cu	Pb	Zn	Ag	Au	Fe	Mn	
	N	E	NORTHING	EASTING																	
X 581162	3187W		387000	3448140		0011		✓	✓	✓	✓						11640				
✓ 581166	NANCY CK					210002		✓	✓	✓	✓						0.038				
X 581170	PARADISE R.					320007		✓	✓	✓	✓						0.008				
X 581177	PARADISE R.					3145008		✓	✓	✓	✓						0.179				
✓ 581182	NANCY CK					2160002		✓	✓	✓	✓						0.008				
✓ 581186	NANCY CK					2135002		✓	✓	✓	✓						0.023				
✓ 643174	OIM R.					3148004		✓	✓	✓	T						0.008				
✓ 643175	OIM R.					3148004		✓	✓	✓	T						0.008				
✓ 658168	OIM R.					350006		✓	✓	✓	T						0.008				
✓ 658174	LUCH CK					210005		✓	✓	✓	T						0.008				
✓ 670174	DOCTORS CK					296003		✓	✓	✓	T						0.008				
✓ 681271	OIM R.					006		✓	✓	✓	T						0.008				
✓ 681276	NANCY CK					003		✓	✓	✓							0.008				
✓ 681293	DOCTORS CK					340002		✓	✓	✓	✓						0.008				
✓ 681297	DOCTORS CK					350003		✓	✓	✓							0.008				
✓ 681300	DOCTORS CK					345003		✓	✓	✓							0.008				

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855061

APPENDIX 3 - PETROLOGY

Sixteen rock chip samples from the Bowry Member of the Pre-Cambrian Batty's Bend Formation were received for petrological identification. Representative thin-sections were prepared and examined together with the respective offcuts, with stain tests performed as warranted. Attached tabulated descriptions summarise the microscopic data, include interpretative comments, and refer to specific queries, where applicable.

Summary

With three exceptions this suite comprises entirely low-grade regional meta-sedimentary facies, dominated by variably feldspathic quartz-mica phyllites. These rocks are weakly carbonaceous and carry more or less ubiquitous accessory authigenic (in part overgrown detrital) tourmaline. Individual rocks carry recrystallized syngenetic pyrite.

Typical assemblages comprise quartz and muscovite + biotite and albite, with inferred low- to mid-greenschist facies regional metamorphism. Relatively low-grade rocks carry accessory chlorite supplementing muscovite. Higher-grade (biotitic) phyllites are partly retrogressively chloritised. Crenulation and stress effects are ubiquitous and grade locally into semi-mylonitic reshearing (sample 53559).

Individual phyllites exhibit faint relict clastic fabrics. As a group, these rocks may be categorised as primarily quartzose to arkosic psammopelites, with minor relatively labile gritty/pebbly variants (sample 44800). Problematically, the pervasive regional metamorphic fabrics, complexed by crenulation and stress effects, negate interpretation of sedimentary environments, although generally low, but fluctuating energy, shallow to mid-depth conditions are reasonably inferred. An exception is represented by a cherty argillite (67075), indicating at least transient deep water conditions. Similarly sample 44789, a pyritic marble/recrystallized carbonate facies, indicates intervals of chemical sedimentation.

Feldspathic phyllites tend to exhibit carbonate alteration. This phase appears selective to the relatively labile phyllites. Finer detail is obscured by weathering effects but, in general, the (sideritic, in part) carbonate is not accompanied by sulphides. Comparative assays would be warranted on carbonated and unaltered rocks.

Three igneous rocks are represented. Sample 53560 is a thoroughly weathered phyllitic metabasic. Sample 67072 represents a micrographic alkali (sodic) microgranite with accessory schorl and ?cassiterite and typical minor intrusive characteristics. Sample 44799 represents a uranitised, recrystallized and mildly sheared gabbroic intrusive. This rock exhibits hornfelsic recrystallization and carries accessory metasomatic schorl, suggesting a proximal (?Devonian) granitic intrusive.

D. Cowan, B. Sc.

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Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. I. Mathison
Senior Geologist
Mineral Resources Division
Electrolytic Zinc Co. of
Australasia Ltd.
P.O. Box 21
ROSEBERY / TAS. 7470

7th April, 1987

REPORT CMS 87/3/18

YOUR REFERENCE:	Order No. 900852
DATE RECEIVED:	19th March, 1987
SAMPLE NOS.:	16 Samples
SUBMITTED BY:	N. Ferguson
WORK REQUESTED:	Petrology

H. W. Fander

H.W. Fander, M. Sc.

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APPENDIX 3 - PETROLOGY

Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
67076 67075 57576	Carbonaceous Pelite. Semi-sericitic white mica with subordinate/variable proportions of microgranular quartz, pervasive carbonaceous matter. Disseminated "metablastic" pyrite.	Weakly chevroned ("kinked"), micro-laminated shale. Incipiently pressure-shadowed pyrite.	Traces of chlorite. Thinly dispersed fine silt-sized detrital tourmaline, zircons. Limonite stainings.	Exhibits carbonaceous pelite-parted "chemical" argillite/impure overt characteristics; inferred deep water sedimentation. Recrystallized syngenetic pyrite.
67075 67072	Granophyre. Albite with subordinate to minor intergrown quartz, minor orthoclase. Sporadic vugs, discontinuous veinlets of quartz. Thinly disseminated clots of dark green-brown schorl.	Albite-porphyrific, medium-grained granitic to micrographic. Pervasively stressed (including veins).	Leucoxenic semi-opaque (degraded ?sphene). Rare zircon, cloudy ?cassiterite. Secondary Mn-stainings.	Differentiated (sodic, alkali) micro-granitic minor intrusive characteristics. Stress postdates veining. Essentially unaltered.
53560	Weathered ?Metadolerite. Illitic clay and partly degraded fine-grained chlorite with minor corroded relics of tremolite, conspicuous oxidised/leucoxenised opaques, minor microcrystalline quartz.	Phyllitic/relict strongly porphyritic; vaguely subophitic.	Degraded biotite flakes. Secondary Fe-stainings.	Thoroughly weathered phyllitic metaigneous characteristics. Interpreted as primarily a porphyritic medium-grained basic intrusive on relict textural grounds.
53559	Resheared Phyllite. Semi-sericitic white mica and sericitised/leucoxene-stained biotite with frequent poikiloblasts of albite, relatively minor quartz, semi-pervasive cloudy carbonate. Irregular veins of siderite and quartz.	Strongly resheared, albite-poikiloblastic, crudely banded, phyllitic. Stressed veins.	Rare zircon, apatite. Thinly disseminated pyrite (locally granulated).	Primarily an albite-poikiloblastic metasedimentary (arkosic) mica-quartz phyllite. Resheared/retrogressively sericitised, veined, restressed. Green phase is sericitic hydromuscovite.
53558	Mica-Quartz Phyllite. Fine subpolygonal, semi-directed quartz with subordinate muscovite, relatively minor degraded/chloritic biotite; thinly disseminated porphyroblastic albite (partly weathered to cavities).	Pervasively crenulated, disharmonically microfolded and boudinaged, phyllitic. Weakly restressed.	Detrital/authigenic tourmaline, minor zircons. Traces of oxidised pyrite, carbonaceous matter.	Weakly albite-porphroblastic metasedimentary phyllite with a marked crenulation/recrystallization overprint. Darker bands are biotitic.
44800 53557	Retrograde Phyllite. Quartz, chlorite and poorly twinned albite in varying proportions with disseminated magnetite, minor ilmenite, and epidote.	Low-angle resheared/mildly boudinaged, banded phyllite. Vaguely relict pebbly sandy clastic.	Relict detrital zircon, apatite, rare tourmaline, rare partly oxidised pyrite.	Retrogressively chloritised biotitic metasediment. Includes stressed quartz pebbles, but is relatively labile (feldspathic) overall.
44799 53556	"Metagabbro". Uralitic (pyroxene-derived) actinolite aggregates and plagioclase lath semi-pseudomorphous, untwinned, fine granular albite with minor quartz and epidote. Disseminated clots of sphene.	Weakly directed, granular/relict even-grained, subophitic, "gabbroic".	Sparse grains, clusters of blue-green schorl, minor fine muscovite, partly oxidised pyrite.	Primarily a medium- to coarse-grained basic intrusive. Fabric is essentially weakly directed hornfelsic and schorl apparently metasomatic. Feldspars are creamy, sphene white.
44798 53555	Mica-Quartz Phyllite. Muscovite with relative minor partly degraded biotite, varying proportions of quartz, minor extremely weathered/ferruginised porphyroblastic albite minor chlorite.	Finely banded, weakly crenulated, phyllitic.	Fine tourmaline (sim. 53558), fine flakey graphite, minor trace magnetite, rare zircons.	Affinities with 53558. In comparison, this rock is distinctly micaceous/weakly feldspathic and exhibits rather incipient secondary shear effects.

Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
44797 53554	<u>Chloritic Quartz-Mica Phyllite.</u> Quartz and fine to semi-sericitic muscovite in varying proportions with minor mica-intergrown chlorite and degraded/ferruginised biotite.	Banded, incipiently crenulated phyllitic/relict silty pebble-parted, fine to medium sandy clastic.	Fine tourmaline, minor degraded feldspar, sparse zircons, minor trace oxidised pyrite.	Primarily an intercalation of quartzose/subarkosic fine to medium sandstone and quartz siltstone/silty shale. Poorly diagnostic in terms of <i>sedimentary environment</i> .
44796 53553	<u>Feldspathic Mica-Quartz Phyllite.</u> Muscovite, quartz and porphyroblastic to poikiloblastic untwinned albite in varying proportions with clots, crude lenses of degraded/ferruginised, feldspar-replacive carbonate.	Mildly low-angle re-sheared, banded, phyllitic; locally vaguely fine to medium sandy clastic.	Graphite, fine tourmaline, rare apatite, zircon. Minor traces of chlorite.	Affinities with 53559, 53558 and 44798. Reflects carbonate alteration similar to 53559, but less marked. Meta-arkosic characteristics.
44794 53551	<u>Feldspathic Mica-Quartz Phyllite.</u> Muscovite with varying proportions of quartz, minor clots and lenses of chlorite, semi-pervasive fine degraded/ferruginised carbonate rhombs, aggregates.	Massive to finely banded, microcrenulated phyllitic. Vaguely feldspar-pseudomorphous limonite clots.	Graphite, traces of tourmaline. Minor spongy clots of secondary Mn-oxide.	Affinities with 53559 etc. Reflects pervasive carbonate (?siderite) alteration of feldspar. Limonite, Mn-oxide are carbonate-derived; no evidence of sulphide.
44793 53550	<u>Feldspathic Mica-Quartz Phyllite.</u> Muscovite and quartz in varying proportions with semi-pervasive clots and crude lenses of limonite representing carbonated/degraded-ferruginised feldspar.	Massive to banded, irregularly crenulated phyllitic.	Graphite, minor fine tourmaline. Minor crenulated veinlets of quartz, degraded carbonate.	Exhibits close affinities with 44794, particularly in terms of alteration and weathering effects. Relatively weakly banded in comparison.
44792 44786	<u>Pyritic Quartz-Mica Phyllite.</u> Quartz and muscovite in near-equant proportions with minor chlorite. Evenly disseminated fine, weakly pressure-shadowed pyrite.	Weakly banded, meso-folded/crenulated, phyllitic.	Fine tourmaline, minor fine clots of degraded carbonate. Rare zircons.	Pyritic, weakly chloritic phyllitic metapelite with minor accessory clots of degraded carbonate, probably after feldspar. <u>Pyrite is recrystallized syngenetic.</u>
44791 44785	<u>Quartz-Mica Phyllite.</u> Fine subpolygonal/directed quartz with relatively minor semi-sericitic white mica, very minor chlorite. Minor secondary discontinuous films of limonitic clay.	Medium-angle micro-crenulated, phyllitic/vaguely relict fine sandy clastic.	Traces of tourmaline, relatively conspicuous relict detrital zircons.	Relatively siliceous phyllitic low-grade metasediment, primarily a weakly argillaceous quartzose silty fine sandstone. Relatively massive (unbanded).
44790 44784	<u>Chloritic Quartz-Mica Phyllite.</u> Fine sub-polygonal/directed quartz with relatively minor fine muscovite and intergrown chlorite, minor partly weathered/ferruginised untwinned albite.	Closely analogous to 44791; weakly banded and albite-porphyroblastic in comparison.	Traces of tourmaline, minor traces of graphite. Detrital zircons.	Close affinities with 44791, slightly relatively micaceous and chloritic in comparison, and weakly banded on a millimetric scale.
44789 (T.S. 57591)	<u>Pyritic Marble.</u> Fine to microgranular magnesian carbonate with disseminated fine, marginally oxidised pyrite euhedra. Sporadic irregular veins of dolomitic carbonate.	Massive to incipiently banded, with micro-scale, partly recrystallized veinlets; late irregular veins.	Minor traces of quartz in dolomite veins.	Weakly pyritic, low-grade regional metamorphic marble. Main carbonate phase appears to be a slightly impure magnesite. May warrant XRD confirmation.

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Central Mineralogical Services



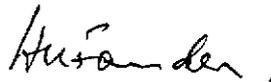
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12th February, 1987

REPORT CMS 87/1/11

YOUR REFERENCE:	Order No. 900818
DATE RECEIVED:	15th January, 1987
SAMPLE NOS.:	Samples
SUBMITTED BY:	N. Ferguson
WORK REQUESTED:	Petrology


H.W. Fander, M. Sc.

067

REPORT CMS 87/1/11

A suite of forty-two rock chip samples from the Arthur project was received for brief petrological description. Representative thin-sections were prepared, examined in transmitted light and together with respective offcuts in oblique incident light. Attached tabulated descriptions summarise the microscopic data and include interpretative comments.

Summary

The bulk of this suite comprises low-grade regional metasedimentary facies typified by quartz-muscovite and muscovite-quartz phyllites. These rocks are generally porphyroblastic in albite, and carry minor epidote consistent with a sequence of partly volcanically derived or mildly tuffaceous psammopelites, with inferred intermediate plagioclase as a clastic component. Individual rocks are variably graphitic, and authigenic tourmaline is a ubiquitous accessory component. Stress and reshearing effects are more or less ubiquitous, with relatively resheared examples reflecting chloritisation and locally sericitisation of feldspar as retrograde effects.

Albite porphyroblasts exhibit late syntectonic or early post-tectonic temporal relationships with respect to the primary (phyllitic) cleavage. These features are rarely accompanied by a little sericitised andalusite and may reflect a broadly synkinematic granitoid. Cordierite could be expected in this environment and is, conceivably, locally obscured by alteration and weathering effects.

A subordinate group of altered igneous rocks is represented with uraltitised to greenschist facies regionally metamorphosed basics (basalts, dolerites/microgabbro),

Accessory lithologies include a low-grade metajaspilite, a metasomatic actinolite-schorn rock, and a mildly metasomatised actinolitic hornfels.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
58146 (T.S. 57315)	"Metabasic". Poikilitic, poorly twinned, epidote-stained albite with varying proportions of muscovite and chlorite; minor quartz. Evenly disseminated opaques and cloudy sphene.	Phyllitic/vaguely relict "doleritic", massive to incipiently banded/mica-foliated, weakly crenulated.	Minor traces of dark green schorl, apatite, carbonate.	Poorly diagnostic albitic phyllite with meta-igneous characteristics. Interpreted as primarily a basic intrusive on vague relict textural grounds.
58152	Albite-Mica-Epidote Phyllite. Quartz and muscovite with disseminated epidote-stained poikilitic albite. Minor chlorite, pervasive fine hematite, minor partly degraded (chloritic/Fe-stained) biotite.	Albite-poikiloblastic, mica-foliated, mildly crenulated, phyllitic.	Minor traces of dark green schorl, apatite.	Compositional affinities with 58146; distinctly siliceous and meta-sedimentary in comparison. Primarily a basic-intermediate tuffaceous turbidite?
58154	"Metabasic". Quartz and poorly twinned albite with pervasive chlorite and epidote. Disseminated magnetite and leucoxenised ilmenite; sporadic vugs, irregular veinlets of epidote.	Vague relict "doleritic", with a mildly crenulated phyllitic overprint.	Traces of hastingsite, minor traces apatite, rare oxidised ?chalcopyrite.	Chlorite represents degraded biotite in part. Distinctly metabasic characteristics with affinities to 58146.
58155	Albite-Mica Phyllite. Partly degraded/illitised muscovite with pervasively disseminated poikilitic, poorly twinned albite. Semi-pervasive epidote, minor quartz, pervasive fine hematite.	Albite-poikiloblastic, weakly banded, phyllitic/weakly crenulated.	Chlorite, traces of tourmaline, minor traces of apatite.	Affinities with 58152, with similar metasedimentary characteristics; relatively micaceous in comparison.
58156	Uralitised Microgabbro. Uralitic actinolite and vaguely feldspar-pseudomorphous, fine-grained epidote, with interstitial epidote-stained quartz. Conspicuous leucoxenised opaques.	Relict weakly pyroxene-porphyrific, quartz-mesostasised, "doleritic". Mildly stressed.	Traces of chlorite, minor microscale quartz veinlets. Minor traces oxidised ?chalcopyrite.	Thoroughly epidote-actinolite-altered and mildly stressed basic igneous characteristics. Affinities with the relatively sheared 58146 and 58154.
58157	Mica Phyllite. Pale green muscovite with relatively minor fine epidote, thinly disseminated partly degraded poikilitic albite, semi-pervasive fine graphite. Irregular aggregates of quartz.	Contorted, phyllitic, with boudinaged/partially recrystallized quartz veinlets.	Traces of tourmaline. Sporadic clots of degraded/ferruginised ?carbonate in quartz veinlets.	Relatively micaceous phyllitic meta-sediment; similarities with 58152, 58155; distinctly resheared in comparison.
58159	Actinolite-Epidote-Quartz Phyllite. Fine actinolite and epidote with interspersed lenses of quartz and coarser-grained epidote; disseminated epidote-stained poikilitic albite. Minor chlorite.	Albite-poikiloblastic, crudely lensoid-banded, phyllitic, mildly crenulated.	Minor fine cloudy sphene, traces of hematite, secondary limonite films.	Relatively sheared/phyllitic, but with distinct affinities to 58156. Epidote-quartz lenses interpreted as amygdales.
58161	"Metabasic". Fine, partly chloritised actinolite with pervasive epidote, subordinate to minor quartz and poikilitic albite; evenly disseminated fine leucoxenised opaques.	Incipiently lenticularly banded, weakly crenulated, phyllitic.	Traces of hastingsitic amphibole, minor limonite stainings.	Similarities with 58159, affinities with 58146, etc. Primarily relatively fine-grained. Inferred basaltic-andesitic primary composition.

855069

Sample No.	Classification - Composition	Fabric	Accessories	Comments
68203	<u>Quartz-Mica Phyllite</u> . Quartz and muscovite in varying proportions with disseminated poikilitic, poorly twinned albite, semi-pervasively disseminated very fine schorl, minor degraded biotite.	Albite-poikiloblastic, fine-grained, banded, schistose. Mildly resheared.	Traces of fine-grained oxidised pyrite, relic detrital silt-sized zircon.	Albite-blastic phyllite/fine schist with typical metasedimentary characteristics; primarily a micaceous arkosic psammopelite.
68206	<u>Chloritic Quartz-Mica Phyllite</u> . Muscovite with subordinate intergrown chlorite, varying proportions of quartz, minor poikiloblastic albite. Lensoid zones of vein-type quartz.	Foliated, mildly crenulated, fine-grained, schistose. Concordant stressed/party recrystallized	Traces of chloritic biotite, tourmaline, epidote, graphite, zircon, apatite. veins.	Affinities with 68203; relatively micaceous, chloritic, weakly feldspathic in comparison. Quartz veins are weakly chloritic.
68208	<u>Crenulated Phyllite</u> . Quartz and muscovite with subordinate chlorite and poikiloblastic albite with epidote inclusions. Minor partly degraded/chloritised biotite.	Strongly crenulated to boudinaged, phyllitic.	Thinly disseminated fine tourmaline, minor traces of graphite, rare apatite, zircon.	Close affinities with 68206; slightly relatively feldspathic and distinctly crenulated in comparison.
68209	<u>Resheared Phyllite</u> . Chlorite with relatively minor degraded/Fe-stained, semi-sericitic white mica, varying proportions of microgranular quartz; zones of vein-quartz.	Very fine-grained, boudinaged, phyllitic, with segmented, stressed/party recrystallized vein-quartz.	Ferruginous/leucoxenic semi-opaques, minor traces of tourmaline. Cavities after ?albite.	Thoroughly resheared, chloritised and partly weathered/Fe-stained phyllitic characteristics. Includes fine clots of ?epidote-derived limonite.
68210	<u>Mica-Quartz Phyllite</u> . Fine muscovite with minor chlorite and degraded biotite; subordinate to minor quartz, disseminated fine green schorl and leucoxenic semi-opaques.	Lenticularly to planar banded, phyllitic, with a low-angle crenulation overprint.	Minor traces of graphite, sparse clots of microgranular albite.	Affinities with 68203 etc. Microgranular albite clots apparently represent porphyroblasts recrystallized in response to reshearing.
68211	<u>Quartz-Mica Phyllite</u> . Quartz and muscovite in varying proportions with minor chlorite and epidote; disseminated poikiloblastic albite, fine graphite.	Crudely banded, phyllitic, pervasively stressed/low-angle resheared.	Traces of tourmaline, degraded biotite.	Typical albite-poikiloblastic metasedimentary quartz-mica phyllite with low-angle reshearing effects.
68212	<u>Quartz-Mica Phyllite</u> . Quartz and partly degraded/ferruginised muscovite in varying proportions, minor chlorite, disseminated partly degraded albite and partly ferruginised epidote.	Banded, phyllitic, albite-poikiloblastic, with minor concordant quartz veinlets. Weakly stressed.	Traces of graphite, tourmaline, oxidised/leucoxenised opaques.	Similarities with 68203 etc., and particularly 68211; finer detail obscured by relatively marked weathering effects.
68213	<u>Crenulated Mica Phyllite</u> . Muscovite with semi-pervasively disseminated albite poikiloblasts; relatively minor quartz, minor epidote, fine graphite.	High-angle crenulated, banded, phyllitic, sporadic lensoid recrystallized quartz veinlets.	Minor traces of tourmaline. Minor cavities after ?carbonate in quartz veinlets.	Albite poikiloblasts clearly late to post-tectonic with respect to primary phyllitic cleavage. Relatively micaceous and crenulated, otherwise typical.

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Sample No.	Classification - Composition	Fabric	Accessories	Comments
68214	<u>Quartz-Mica Phyllite</u> . Quartz with subordinate, variable proportions of muscovite, minor degraded biotite, thinly disseminated recrystallized epidote.	Banded, low-angle semi-boudinaged, fine-grained, schistose.	Minor cloudy sphene, dark green tourmaline.	Includes minor partly recrystallized relict detrital sand-sized quartz grains. Relatively compositionally simple (non-feldspathic) in comparison with 68203 etc.
68215	<u>Mica-Quartz Phyllite</u> . Muscovite with subordinate to minor quartz, thinly disseminated cavities after porphyroblastic feldspar (kaolinised), minor degraded biotite.	Low-angle micro-crenulated, banded, porphyroblastic, phyllitic.	Traces of tourmaline, cloudy sphene, epidote.	Similar to 68214, with sporadic relict detrital quartz. Relatively micaceous and weakly feldspathic in comparison.
68216	<u>Chlorite-Albite-Quartz Rock</u> . Fine-grained Mg-chlorite with conspicuous poikiloblastic untwinned albite, subordinate quartz, minor corroded muscovite, disseminated fine cloudy sphene.	Contorted, phyllitic; mildly restressed.	Patchy albite-replacive secondary kaolin. Traces of graphite.	Interpreted as a relatively resheared/boudinaged and retrogressively chloritised feldspathic mica-quartz phyllite. Clear affinities with 68203 etc.
68249	"Spotted Phyllite". Muscovite with conspicuous poikiloblastic untwinned albite, relatively minor quartz, conspicuous fine graphite, minor chlorite.	Crenulated, strongly poikiloblastic ("spotted"), weakly banded, phyllitic.	Traces of tourmaline, minor leucoxenic semi-opaques, cloudy sphene.	Strongly feldspar-poikiloblastic mica-quartz phyllite. Includes sporadic concordant lensoids of stressed/partially recrystallized vein-quartz.
68252	<u>Quartz-Mica Phyllite</u> . Quartz and muscovite in near-equant proportions with disseminated albite microporphyroblasts, minor degraded/ferruginised biotite, chlorite, fine graphite.	Low-angle mildly resheared, finely porphyroblastic, phyllitic.	Traces of tourmaline, minor stressed/partially recrystallized concordant quartz veinlets.	Finely feldspar-porphyroblastic quartz-mica phyllite with typical mild reshearing and retrograde chloritic alteration effects.
68255	<u>Quartz-Albite-Carbonate-Mica Rock</u> . Quartz and poorly twinned albite with semi-pervasive degraded/ferruginised poikilitic carbonate, subordinate muscovite, minor chlorite, disseminated fine graphite.	Fine-grained, weakly directed ("phyllitic")	Traces of tourmaline, partly degraded/ferruginised epidote.	Detail obscured by weathering effects, but apparently a carbonatic, feldspathic quartzose variant of the associated micaceous metasediments.
68258	<u>Mica-Quartz Phyllite</u> . Muscovite with subordinate quartz; thinly disseminated poikiloblastic albite, pervasively disseminated fine graphite.	Albite-poikiloblastic, fine-grained, semi-foliated, micro-crenulated, phyllitic.	Traces of tourmaline, chlorite.	Relatively fine-grained, relatively white micaceous, but otherwise typical phyllitic metasediment.
68259	<u>Quartz-Mica Phyllite</u> . Quartz with subordinate muscovite, minor sericitised albite, minor chlorite, thinly disseminated pyrite (after pyrrhotite?).	Weakly banded, phyllitic, incipiently stressed. Minor lensoid recrystallized quartz veinlets.	Disseminated leucoxenic semi-opaques, traces of tourmaline.	Weakly Fe-sulphide mineralised, siliceous phyllite. Exhibits incipient retrograde alteration effects (sericitisation of feldspar, pyritisation of pyrrhotite).

Sample No.	Classification - Composition	Fabric	Accessories	Comments
68260	Weathered Phyllite. Quartz and partly degraded/ferruginised muscovite in varying proportions with subordinate chlorite; disseminated to conspicuous cavities, limonitic clay pseudomorphs after feldspar.	Porphyroblastic, weakly low-angle resheared, banded, phyllitic.	Degraded/ferruginised epidote, traces of graphite, tourmaline, oxidised pyrite, detrital zircon, leucoxene.	Chloritic, "retrograde" and mildly resheared feldspathic quartz-mica phyllite with sporadic clots of oxidised pyrite. Relatively weathered. DPI
68261A	Weathered "Microgneiss". Quartz with relatively minor muscovite; pervasive/conspicuous cavities and kaolinitic pseudomorphs after poikiloblastic feldspar. Sporadic clots, films of secondary limonitic clay.	Strongly poikiloblastic, incipiently banded; pervasively mildly stressed, phyllitic.	Relatively conspicuous traces of tourmaline, leucoxenic semi-opaques, rare detrital zircons.	Strongly quartzofeldspathic (hence "microgneissic") metasedimentary characteristics, with a vague fine to medium sand-sized relict detrital framework.
68261B	Weathered "Microgneiss". Quartz with subordinate/variable proportions of muscovite; pervasive/conspicuous kaolinitic pseudomorphs and cavities after feldspar. Secondary clots, films of limonitic clay.	Similar to 68261A; relatively banded, incipiently stressed.	Leucoxenic semi-opaques, traces of tourmaline, minor zircons. Minor stressed lenses vein-quartz (degraded, feldspathic).	Close affinities with 68261A, relative micaceous and banded in comparison, similarly mildly stressed and weathered.
68263	Mica-Quartz Phyllite. Pale green muscovite with minor intergrown chlorite; subordinate quartz, minor degraded/ferruginised carbonate; pervasively disseminated fine graphite.	Weakly crenulated, phyllitic; banded on a submillimetric scale.	Minor degraded/ferruginised biotite, traces of tourmaline, rare detrital zircons, leucoxenic opaques.	Finely banded (primarily quartzose siltstone-parted) metapelitic phyllite; typically finely (weathered) feldspar-porphyroblastic.
68266	Weathered Hornfels. Fine to microgranular quartz and untwinned albite, with subordinate partly degraded actinolite with clots of partly degraded/ferruginised chlorite, disseminated magnetite, oxidised pyrite.	Crudely banded, fine-grained, hornfelsic.	Sporadic metasomatic clots of brown schorl and allanite, minor relict detrital quartz feldspar grains.	Primarily an arkosic fine sandy siltstone. Exhibits albite-epidote hornfels facies contact-metamorphic/metasomatic effects.
68224	Mica-Quartz Schist. Muscovite with subordinate quartz, thinly disseminated cavities/limonitic clay pseudomorphs after feldspar.	Fine-grained, schistose, resheared, with boudinaged siliceous bands.	Relatively conspicuous fine green tourmaline and leucoxenic semi-opaques.	Resheared/weathered-feldspathic, fine-grained muscovite-quartz schist with affinities to 68214 etc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
68225	<u>Quartz-Mica Schist</u> . Quartz and muscovite in varying proportions with disseminated cavities and kaolinitic pseudomorphs after feldspar, minor sericitic pseudomorphs after ?andalusite.	Banded, porphyroblastic, fine-grained schist, mildly stressed/low-angle resheared.	Leucoxenic semi-opaque, traces of tourmaline, minor traces of graphite.	Partly retrogressively sericite-altered, fine-grained, porphyroblastic quartz-mica schist. Faint relict pelite-parted, fine to medium sandy fabric.
68226 (T.S. 57355)	<u>Retrograde Phyllite</u> . Chlorite (after biotite) with subordinate quartz, disseminated sericitised feldspar porphyroblasts and limonite-pseudomorphed ?actinolite laths, minor muscovite, conspicuous fine leucoxene.	Banded, porphyroblastic, low-angle resheared, phyllitic.	Sporadic clots of kaolin (after sericite), rare tourmaline, relict detrital zircons.	Primarily a porphyroblastic biotite-quartz phyllite with accessory amphibole. Pervasively chlorite (-sericite)-altered and resheared.
64381 (T.S. 57328)	<u>Actinolite-Tourmaline Rock</u> . Fine-grained, mid-green tremolite-actinolite with pervasive clots of pink-brown/dark green pleochroic schorl. Conspicuous cloudy sphene.	Crudely banded, incipiently stressed.	Thinly disseminated partly oxidised fine-grained pyrrhotite.	Exhibits metasomatic characteristics; conceivably an altered basic on basis of evenly disseminated sphene.
64384 (T.S. 57328A)	<u>Sericite-Quartz Rock</u> . Semi- to sericitic white mica and microcrystalline quartz with disseminated leucoxenic semi-opaques, fine oxidised pyrite, fine partly degraded magnetite. Sporadic quartz veinlets.	Featureless to weakly phyllitic. Incipiently banded. Locally vaguely relict shardy?	Minor clots, disseminations of fine-grained green schorl. Secondary kaolin veinlets.	Possibly primarily a fine-grained vitric tuff or pelitic ash. Reflects marked, pervasive, sericite-quartz alteration with accessory pyrite and tourmaline.
96327	<u>"Metajaspilite"</u> . Fine to microgranular/directed quartz with varying proportions of partly degraded magnetite, minor degraded/ferruginised carbonate; disseminated pyrite.	Intricately planar to semi-lenticularly compositionally banded; concordantly sheared.	Traces of degraded/ferruginised ?amphibole.	Typical low-grade regional metamorphosed ferruginous chert or "B.I.F." characteristics, with no tangible clastic components.

APPENDIX 4 - Report on a Tourmaline Sample
by G.J. Davidson

PETROLOGICAL REPORT ON A TOURMALINE SAMPLE FROM
THE ARTHUR LINEAMENT AREA, MAY 1987

G.J.DAVIDSON.

Objective: A tourmaline-rich sample from the Arthur Lineament area, not far from the Meredith Granite, was brought to the author with the express aim of determining whether or not the tourmaline composition would be useful in finding mineralisation. This is in the light of studies proposing that different mineralised settings give rise to specific tourmaline compositions.

Conclusions: The sample is a metasomatically altered basic dyke (or volcanic). The protolith was TiO_2 -rich, and may have been related to the DeepCreek Volcanics of the Whyte River complex, Cleveland area (1.57-3.95% TiO_2). As such it is unlikely to be a pointer to volcanogenic massive sulphides. Indeed, probing shows the samples are generally more iron-rich than VMS-associated dravite.

It is probable that the metasomatism results from deuteric granite or porphyry fluids, and therefore that the immediate region is prospective for replacement Sn-W-Cu mineralisation. Detailed discussion of this possibility occurs in the text.

Petrography

The rock is unbanded in thin-section, comprising a mix of approx. 40% tourmaline with a fine-grained matrix of actinolite, and accessory pyrite.

The felted mass of sub to euhedral pleochroic light-green to clear fine-grained actinolite is overgrown by coarse (1-3mm) prisms and plates of pink-brown to dark olive-green tourmaline (ie schorl).

Actinolite does not show a cleavage or preferential growth direction. It is generally intergrown with fine disseminated (1%) sphene. Tourmaline is observed to alter actinolite and hence post-date it. It is generally tabular, full of very fine sub-concentric inclusions. Where tourmaline occurs in massive patches, sphene is much coarser-grained (~1mm), probably recrystallised. Minor grain-boundary zoning of tourmaline occurs.

Pyrite (not pyrrhotite as previously reported) constitutes ~5% of the total rock, occurring in fine to medium-grained brecciated clusters. In two grains small inclusions of bornite and digenite were observed. Pyrite

generally post-dates tourmaline (enclosing relationship), but some tourmaline-pyrite-tourmaline overgrowths testify to late tourmaline growth.

Euhedral magnetite enclosed by pyrite, also postdates tourmaline growth by enclosing relationships. No other accessory (for instance cassiterite) was observed.

In summary the metasomatic paragenetic sequence in the slide is actinolite+sphene, followed by tourmaline+magnetite, followed by pyrite+tourmaline.

Tourmaline Chemistry

Half a day of microprobe time was spent analysing tourmaline and other phases in the rock. The average composition of tourmaline in the rock is:

	Tourmaline	Pyroxene	Actinolite
SiO ₂	35.13	57.26	55.67
TiO ₂	0.73	2.06	0.41
Al ₂ O ₃	28.60	3.42	0.50
FeO	11.73	5.55	6.16
MgO	6.59	21.62	20.05
CaO	0.20	11.38	12.39
Na ₂ O	2.80	0.60	0.46
TOTAL	85.43	101.9	95.63

Fe/Fe+Mg ratios vary from core to rim from 51.60 to 45.98, confirming petrographic observations of zoning.

Tourmaline contains small inclusions of clinopyroxene (not seen petrographically), composition shown in the above table. The pyroxene is close to the composition of actinolite minus volatiles, suggesting one to be the hydration product of the other. All are relatively TiO- rich.

Discussion

In general terms past workers have found that granitic and deuterically-derived tourmalines are schorls (Fe-rich) while those associated with VMS's in stratiform layers, pipes and alteration zones, are dravitic (magnesian). {Tourmalines occur in other settings, but its abundance here reasonably precludes these}.

This simple picture of the schorl-dravite solid-solution series is

complicated by the authors conviction that fluids altering country rock (eg deriving from granite) tend to deposit tourmalines having Fe/Fe+Mg ratios trending towards the altered rock. However, at the site of metasomatic mineralisation the fluid-to-rock ratio is so high that tourmaline deposited is more likely to reflect the **fluid** chemistry.

This is illustrated by Wolfgang Barths work (Tas. Uni; in press) at Cleveland mine showing granite, quartz-porphry and tin-lode tourmalines to be Fe-rich with an average of 0.90 Fe/Fe+Mg. Even altered shale contains schorl tourmalines at this site. We have no information on the chemistry of tourmalines in the Deep Creek Volcanics, which Collins(1984) reports to be altered 80-100m from ore (tourmalinisation of basalt is usually only 1-2m from ore however). More dravitic samples were found in greisenised sandstones around altered porphyry dykes, suggesting the above hypothesis of host-rock chemical contribution to be true.

The microprobe geochemistry of the sample shows the tourmalines are generally more Fe-rich than most VMS-associated samples. Conversely they are more Fe-poor than local porphyry or Meredith Granite tourmalines. Petrographically the tourmalines show metasomatic features, and I conclude that an original granitic fluid has reacted with an Mg-rich host to produce hybrid tourmaline, under 'low' fluid -to-rock ratios.

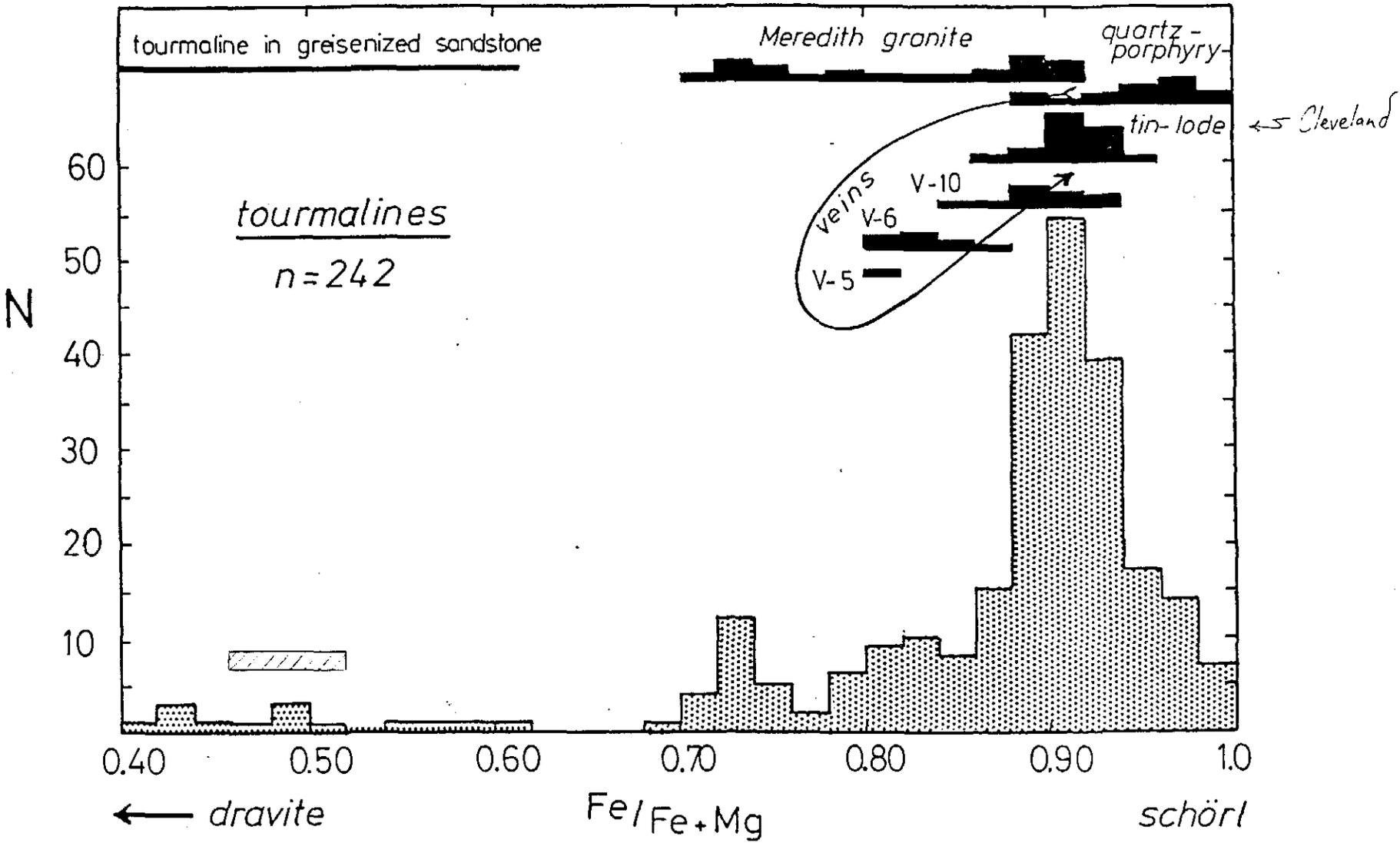
Clearly the field-site needs to be investigated in detail for other signs of deuteric alteration. The limited distance of tourmaline alteration away from ore at Cleveland suggests that mineralisation could be quite close to the site. A cautioning feature of the slide is primary pyrite, as most Cleveland pyrite is a secondary alteration of pyrrhotite.

Recommendations:--Check the site for any wider actinolite and/or sericite halo (at Cleveland this is 80-100m wide), or any sign of veining, or chert formation. Calcareous units are of particular interest, as are any magnetic anomalies associated with them.

--Use the tin halo established at Cleveland as a guide. Tin in non-altered basalt increases steeply within about 50m of sulphides from <10ppm to >300ppm adjacent to ore.

Plot of tourmaline compositions at Cleveland Mine, including nearby granite, quartz-porphry, W-bearing vein-sets, and tin lode. The position of the Arthur Lineament sample is shown also.

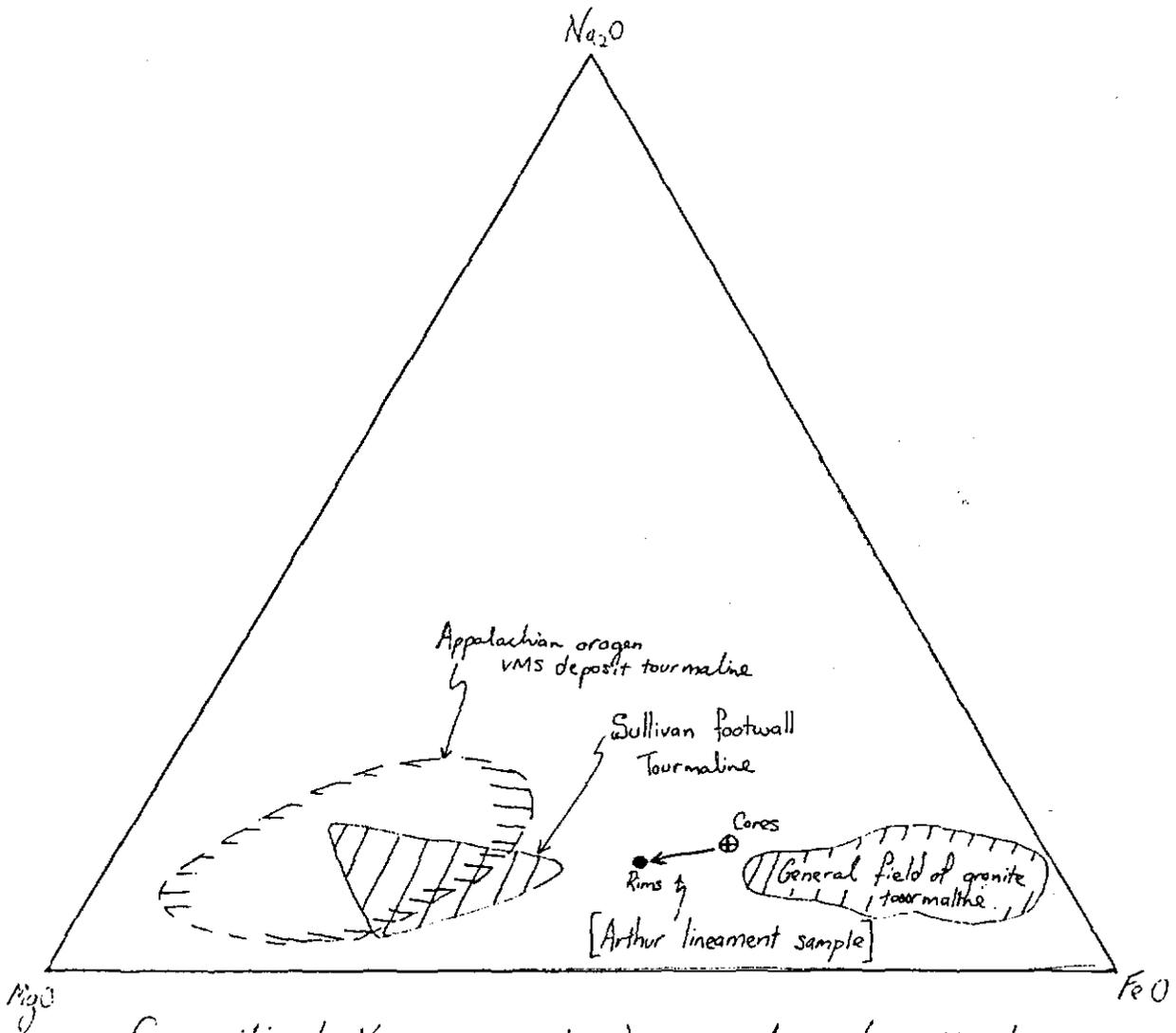
077



////// Average comp
of tourmalines in
veins

{ Diagram not published,

855078



Compositional Variation in selected tourmaline depositional settings. The Meredith Granite falls in the general granite field.

APPENDIX 5 - REVELANT REPORTS

LITERATURE REVIEW

Relevant Reports and publications covering the area are listed below:-

BLAKE, F., 1939:

Report on Corinna Alluvial Goldfield.
Unpub. Report Tas. Dept. of Mines

JULEN, H., 1981:

A History of Gold Mining on the Tasmanian West
Coast.
Regal Press, Launceston.

SCOTT, J.B., 1926:

Report on Brown and Little Plains, Rocky River
District.
Unpub. Report Tas. Dept. of Mines

SMITH, J. Harcourt, 1897:

Report on the Mineral District between Corinna and
Waratah.
Secretary for Mines Report, 1896-97

THUREAU, G., 1881:

West Coast Progress Report on Mines.
House of Assembly Paper No. 82.

THUREAU, G., 1884:

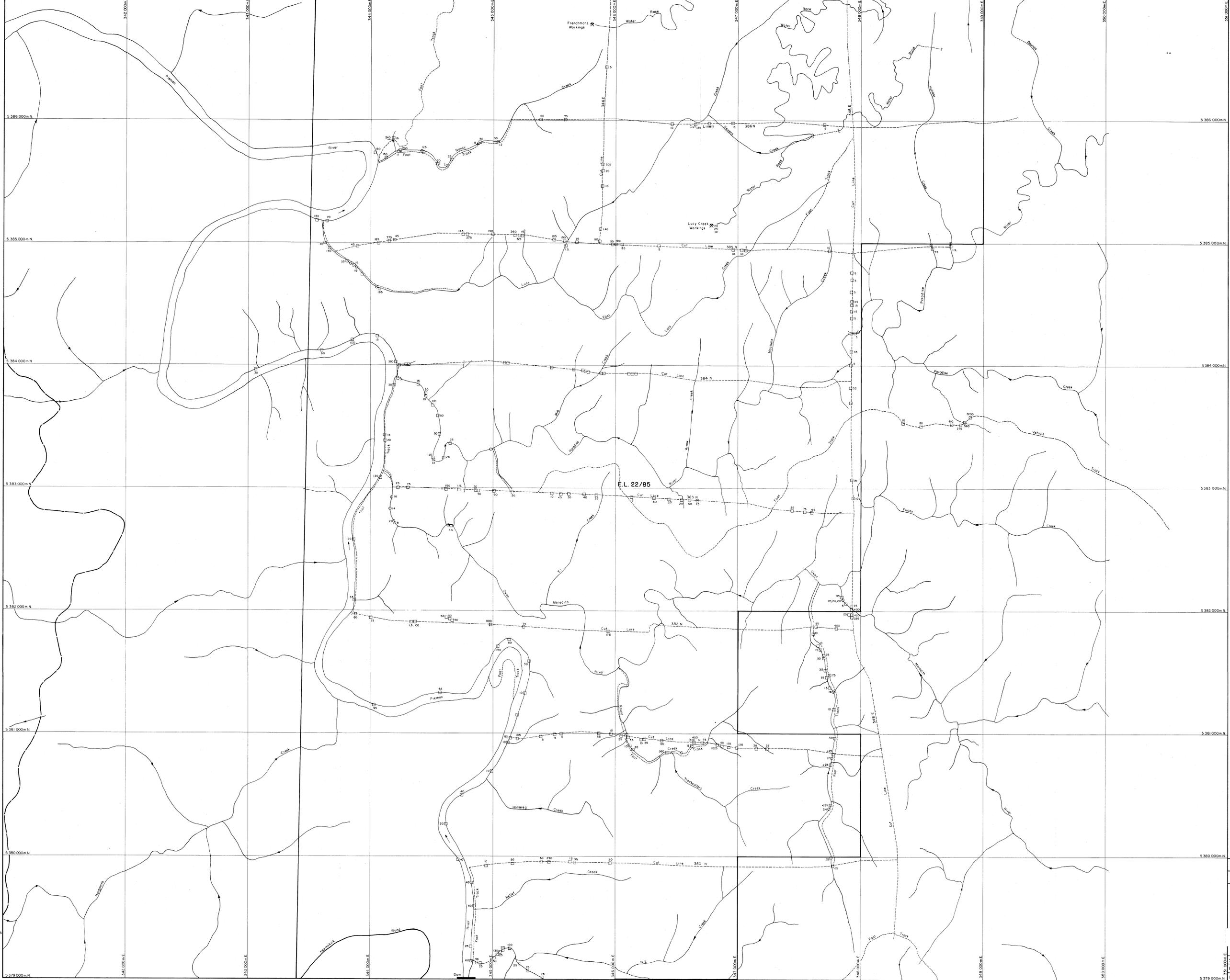
Report on Mt. Cleveland and Corinna Goldfields.
Parliamentary Paper No. 104

TWELVETREES, W.H., 1900:

Report on the Mineral Fields between Waratah and
Corinna.
Secretary of Mines Report, 1889-1900

TWELVETREES, W.H., 1903:

Report on Mineral Fields between Waratah and Long
Plains.
Unpub. Report Tas. Dept. of Mines



□ ROCK CHIP SAMPLE.
 ○ STREAM SEDIMENT SAMPLE.
 I.S. - Insufficient Sample.
 N.B. - All results are ppm.

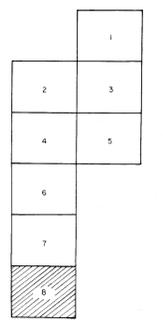


Fig 4

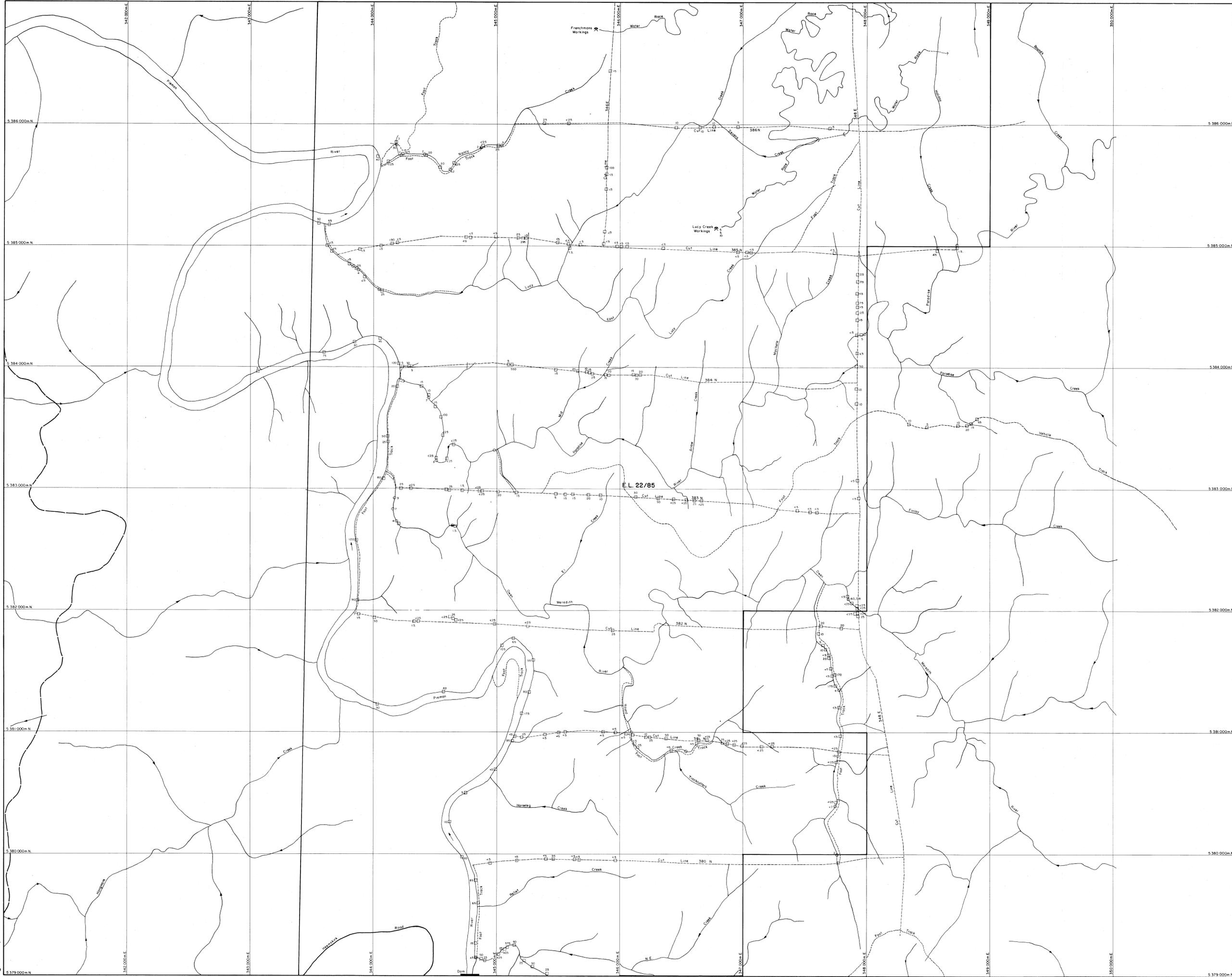
ELECTROLYTIC ZINC CO. of ASIA LTD.
PROJECT: ARTHUR LINEAMENT J.A.S.

87-2734
 Vol 2/2
 855085 GEOCHEMISTRY

5cm Cu

Scale: 1:10,000 Survey: I.M.A.T. Revised:
 Reference: Date: 17-9-'87 Ref. No.
 Drawn: N.W.D.S. Checked: AO-523-0042

7609



□ ROCK CHIP SAMPLE.
 ○ STREAM SEDIMENT SAMPLE.
 I.S. - Insufficient Sample.
 N.B. - All results are ppm.

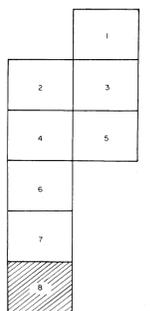
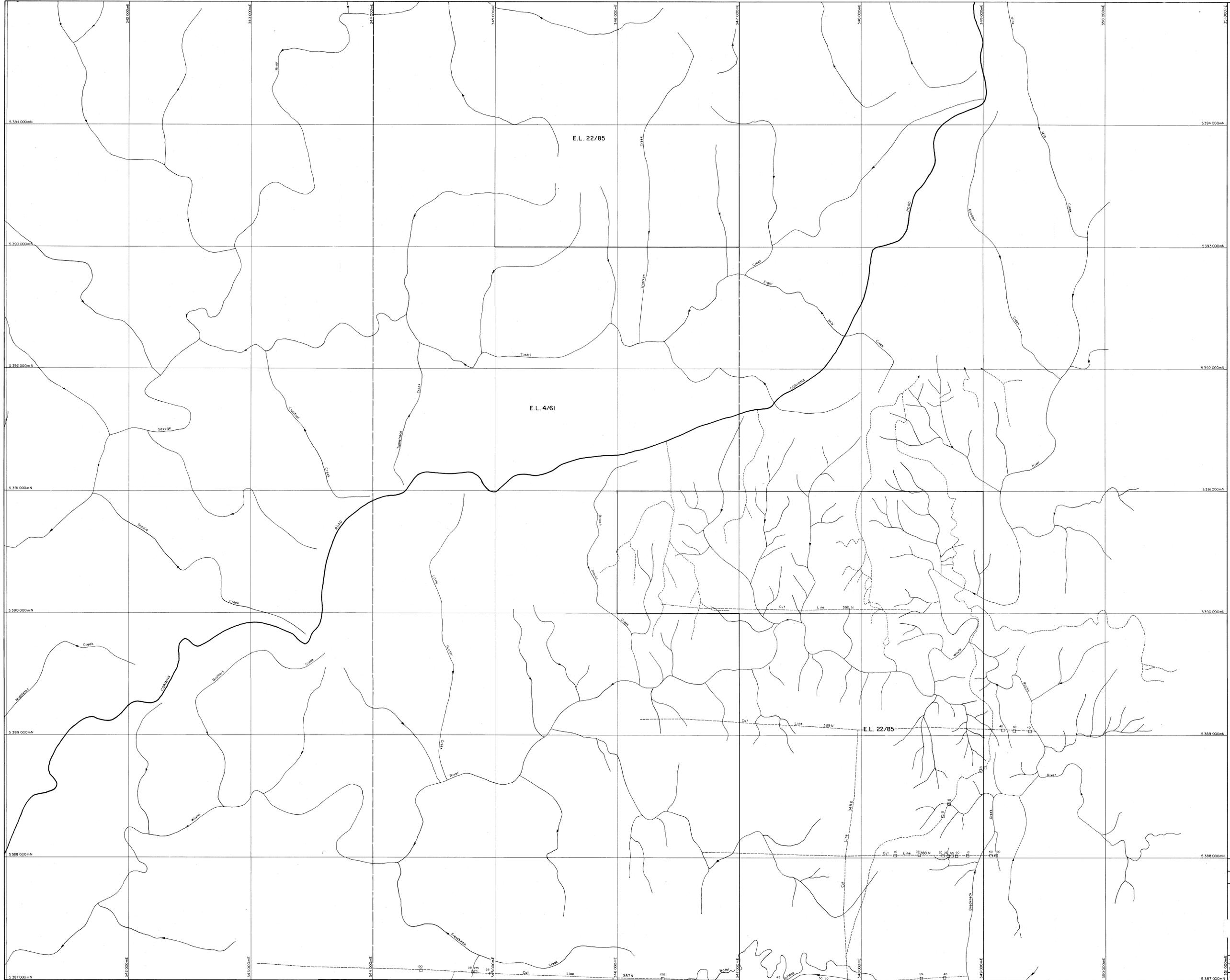


Fig 6

ELECTROLYTIC ZINC CO. of ASIA LTD.
 PROJECT: ARTHUR LINEAMENT ,TAS.
 87-2734
 Vol 2/2
GEOCHEMISTRY
 855087
 Scale: 1:10,000
 Reference: Survey: I.MAT. Date: 17-9-87
 Drawn: N.W.D.S. Checked:

Revised:	6096
Ref. No.	AO-523-0041

6096



□ ROCK CHIP SAMPLE.
 ○ STREAM SEDIMENT SAMPLE.
 I.S. = Insufficient Sample.
 N.B. - All results are ppm.

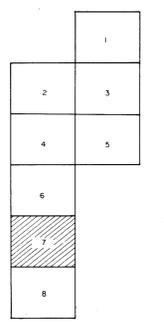


Fig. 7

ELECTROLYTIC ZINC CO. of ASIA LTD.
PROJECT: ARTHUR LINEAMENT JAS.

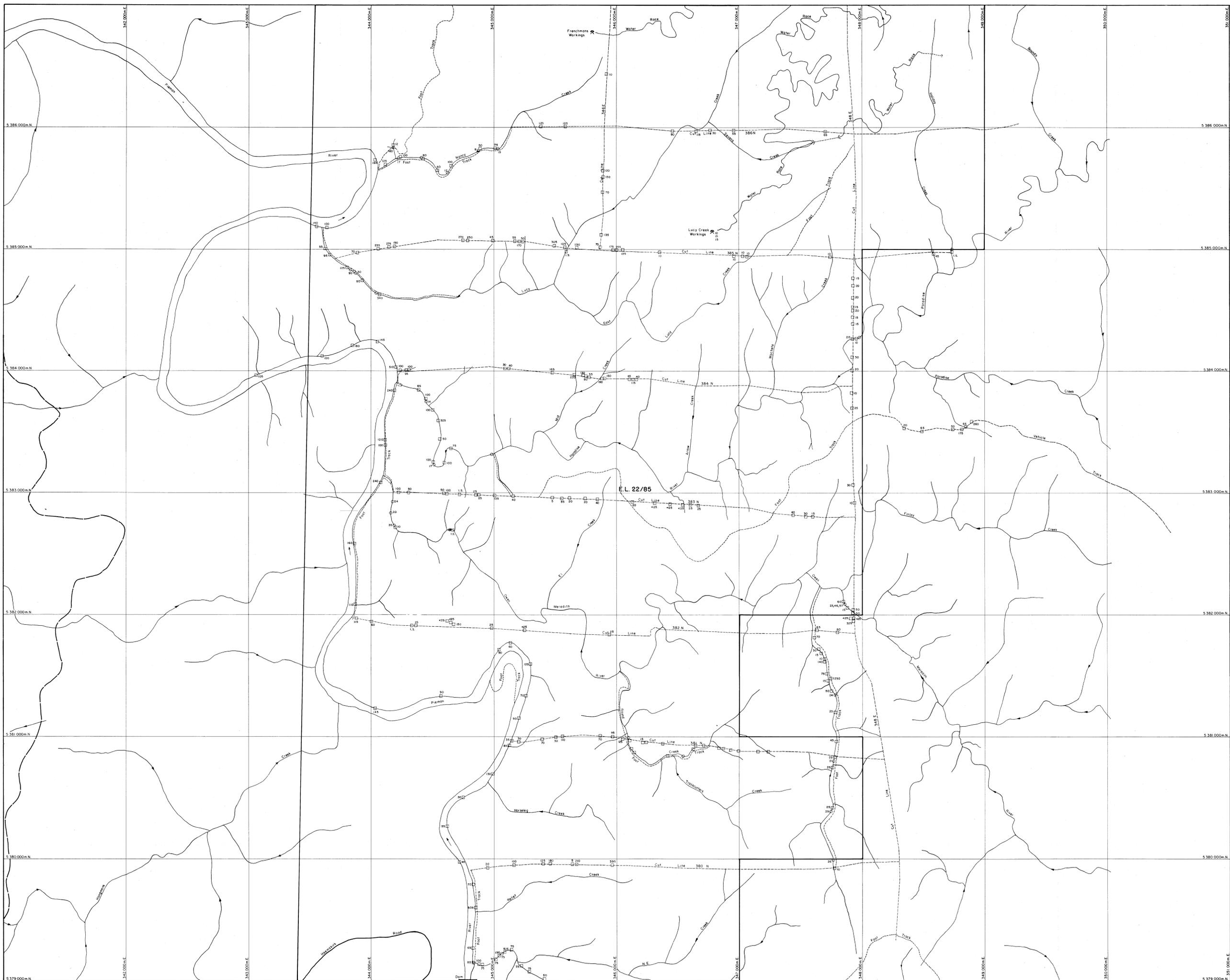
87-2734
 Vol 2/2
555088 GEOCHEMISTRY

Zn

6097

Scale: 1:10,000	Survey: I.M.A.T.	Revised:
Reference:	Date: 17-9-87	Ref. No.
Drawn: N.W.D.S.	Checked:	A0-523-0039

6097



□ ROCK CHIP SAMPLE.
 ○ STREAM SEDIMENT SAMPLE.
 I.S. = Insufficient Sample.
 N.B. - All results are ppm.

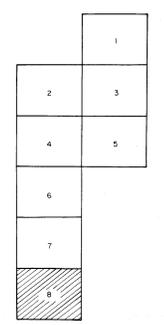


Fig. 8

ELECTROLYTIC ZINC CO. of ASIA LTD.
 PROJECT: ARTHUR LINEAMENT JAS.

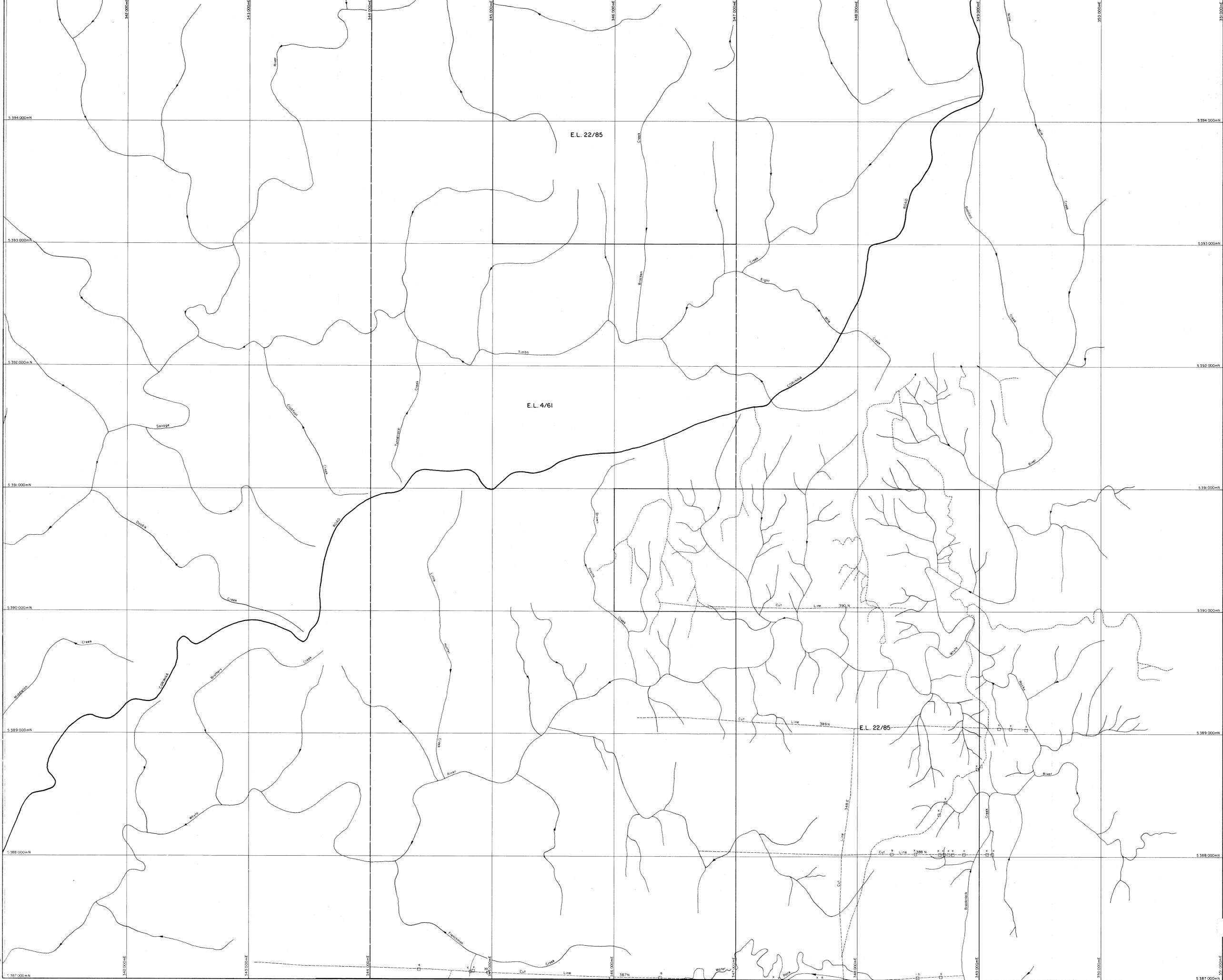
87-2734
 Vol 2/2
 GEOCHEMISTRY



Zn
 555089
 6098

Scale: 1:10,000	Survey: 1 MAT	Revised:
Reference:	Date: 17-9-87	Ref. No.
Drawn: N.W.D.S.	Checked:	AO-523-0043

8609



□ ROCK CHIP SAMPLE.
 ○ STREAM SEDIMENT SAMPLE.
 I.S. = Insufficient Sample.
 X = Less than 8 ppb.
 NB - All results are ppb.

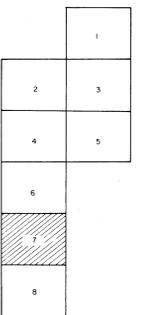
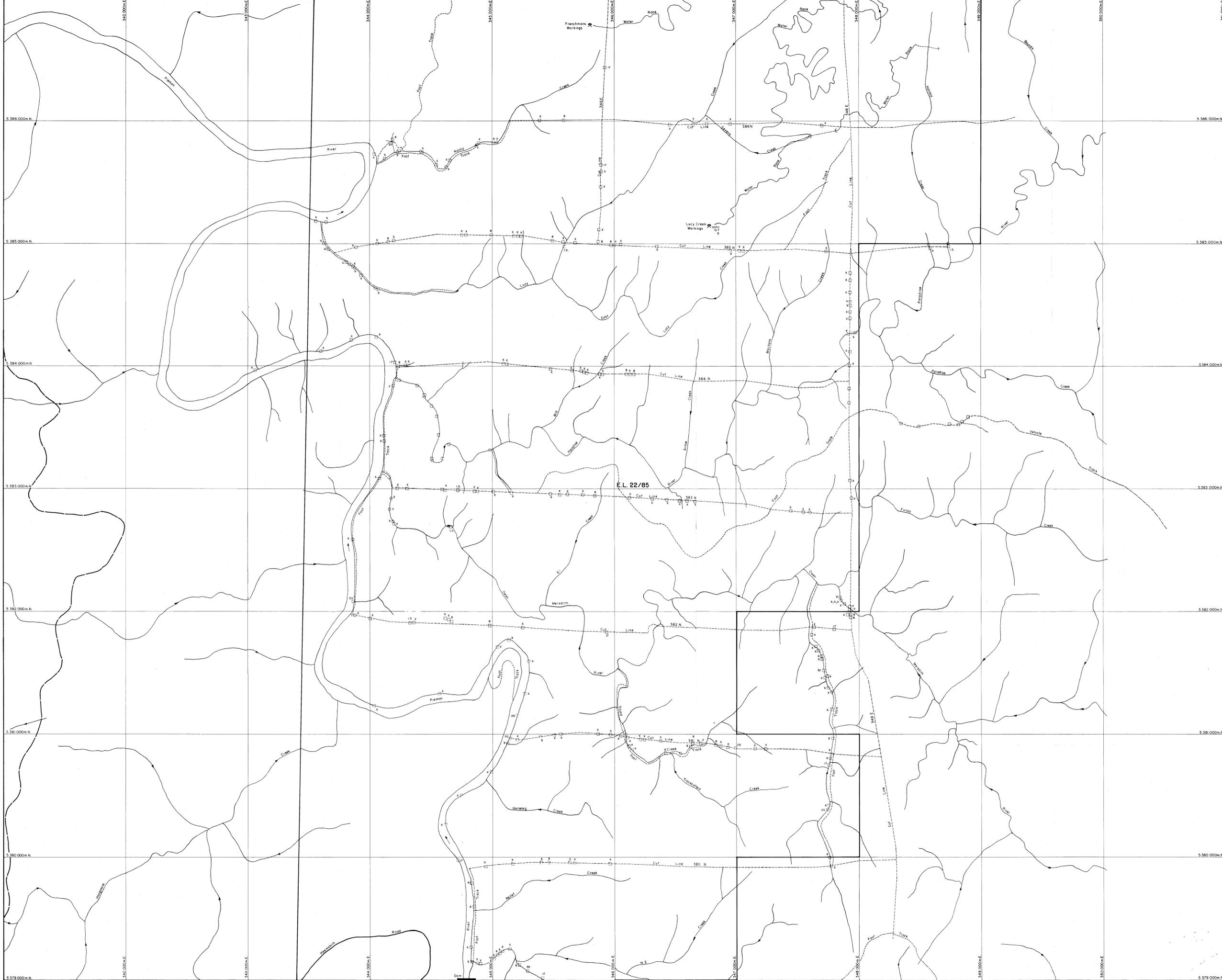


Fig. 9

ELECTROLYTIC ZINC CO. of ASIA LTD.
 PROJECT: ARTHUR LINEAMENT, T.A.S.
 87-2734
 Vol 2/2
 855090 GEOCHEMISTRY
 Au 6099
 Scale: 1:10,000 Survey: 1 MAT Revised:
 Reference: Date: 17-9-87 Ref. No.
 Drawn: N.W.D.S. Checked: A0-523-0040

609



□ ROCK CHIP SAMPLE.
 ○ STREAM SEDIMENT SAMPLE.
 X = <8ppb.
 I.S. = Insufficient Sample.
 N.B. - All results are ppb.

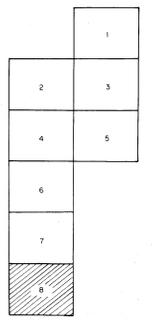


Fig. 10
 ELECTROLYTIC ZINC CO. of ASIA LTD.
 PROJECT: ARTHUR LINEAMENT T.A.S.
 87-2734
 Vol 2/2
 855091 GEOCHEMISTRY
 Au 6100
 Scale: 1:10,000 Survey: I.M.A.T. Revised:
 Reference: Date: 17-9-87 Ref. No.
 Drawn: N.W.D.S. Checked: AO-523-0044

0019

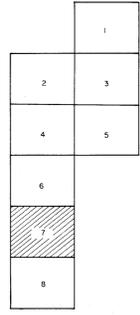
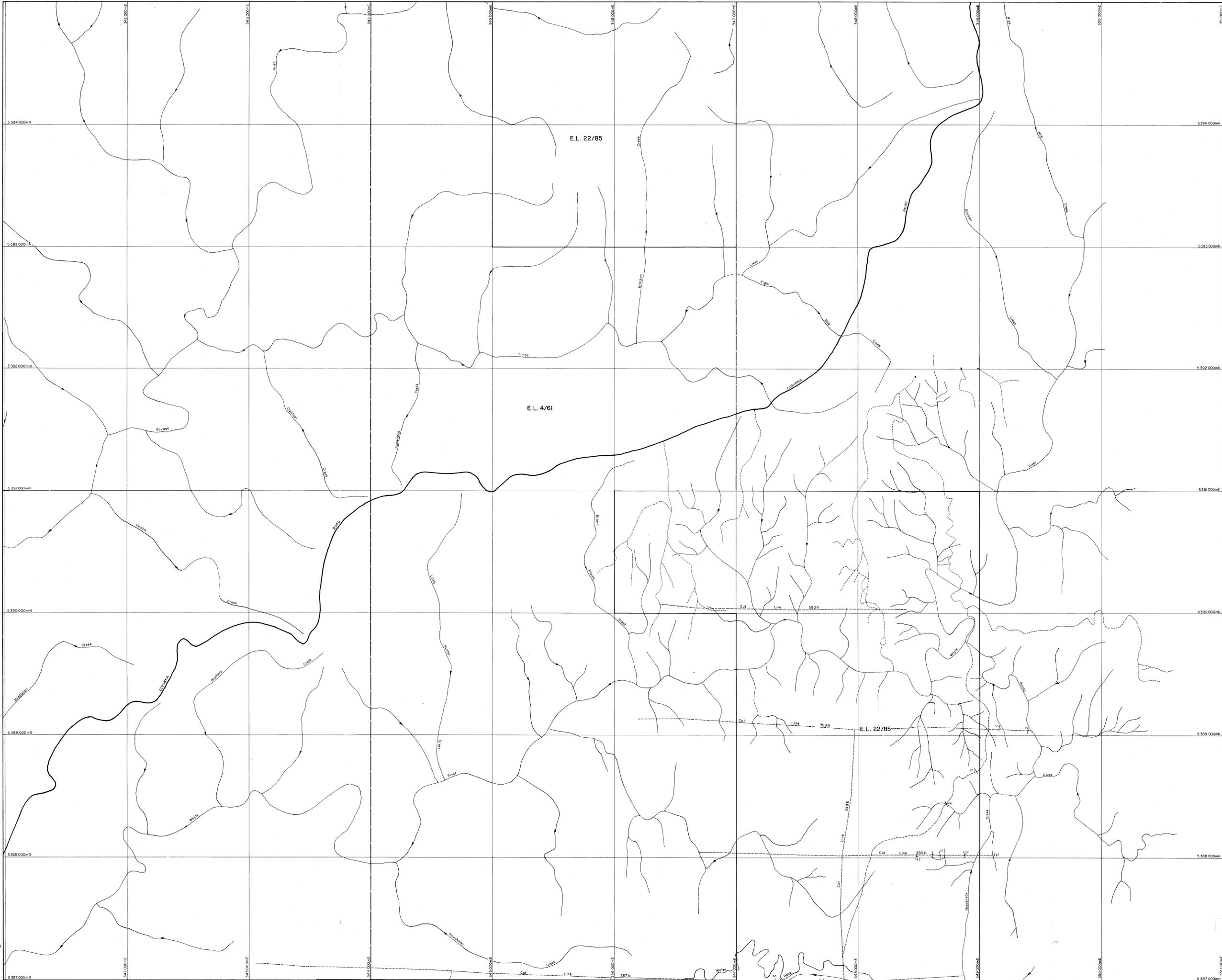


Fig. II

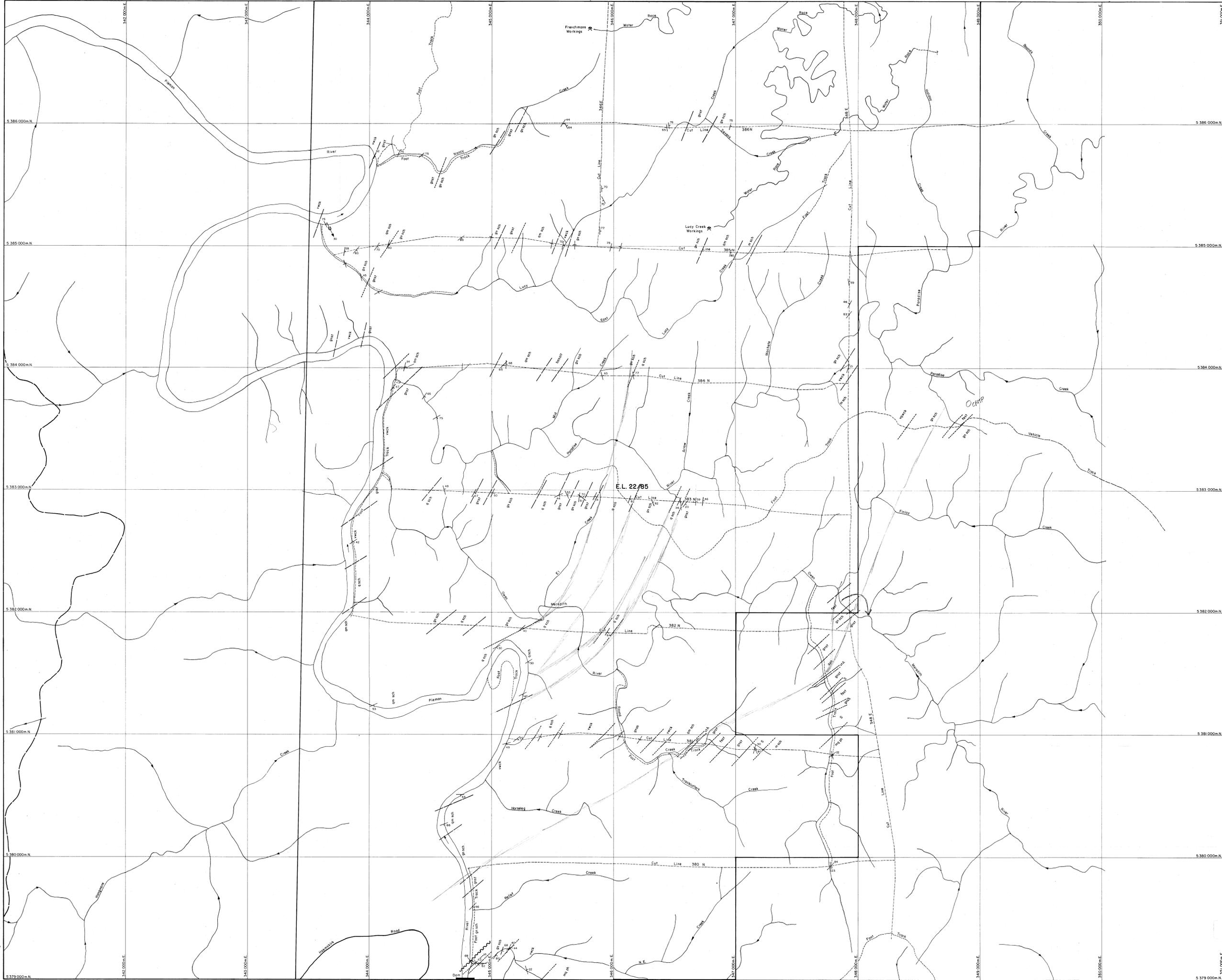
ELECTROLYTIC ZINC CO. of ASIA LTD.
PROJECT: ARTHUR LINEAMENT T.A.S.

87-2734
Vol 2/2
555092
GEOLOGY
(FACT)

Scale: 1:10,000
Survey: N.M.F.
Reference: Date: 20-4-87
Drawn: N.W.D.S. Checked: Ref. No. AO-523-0026

6101

1019



- LEGEND**
- msch = mica schist.
 - gn sch = green schist.
 - gnst = green stone.
 - basalt = basalt.
 - qsch = quartz schist.
 - qm sch = quartz mica schist.
 - S = slate.
 - vta = vitric tuff, Acid.
 - vwck = volcanic wacke.
 - vq wck = volcanic quartz wacke.
 - fsst = iron stone.
 - qmph = quartz mica phyllite.
 - qph = quartz phyllite.
- Solid Line = known contact, Broken = unknown.
 - - - - - Inferred Contact.
 ~~~~~ Shear.  
 ↘ ↙ Dip and strike, angled.  
 ↕ Dip and strike, vertical.  
 ↘ ↙ 30 Plunge of anti-cline.

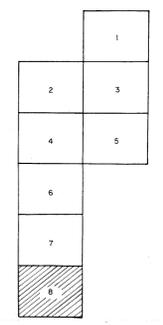


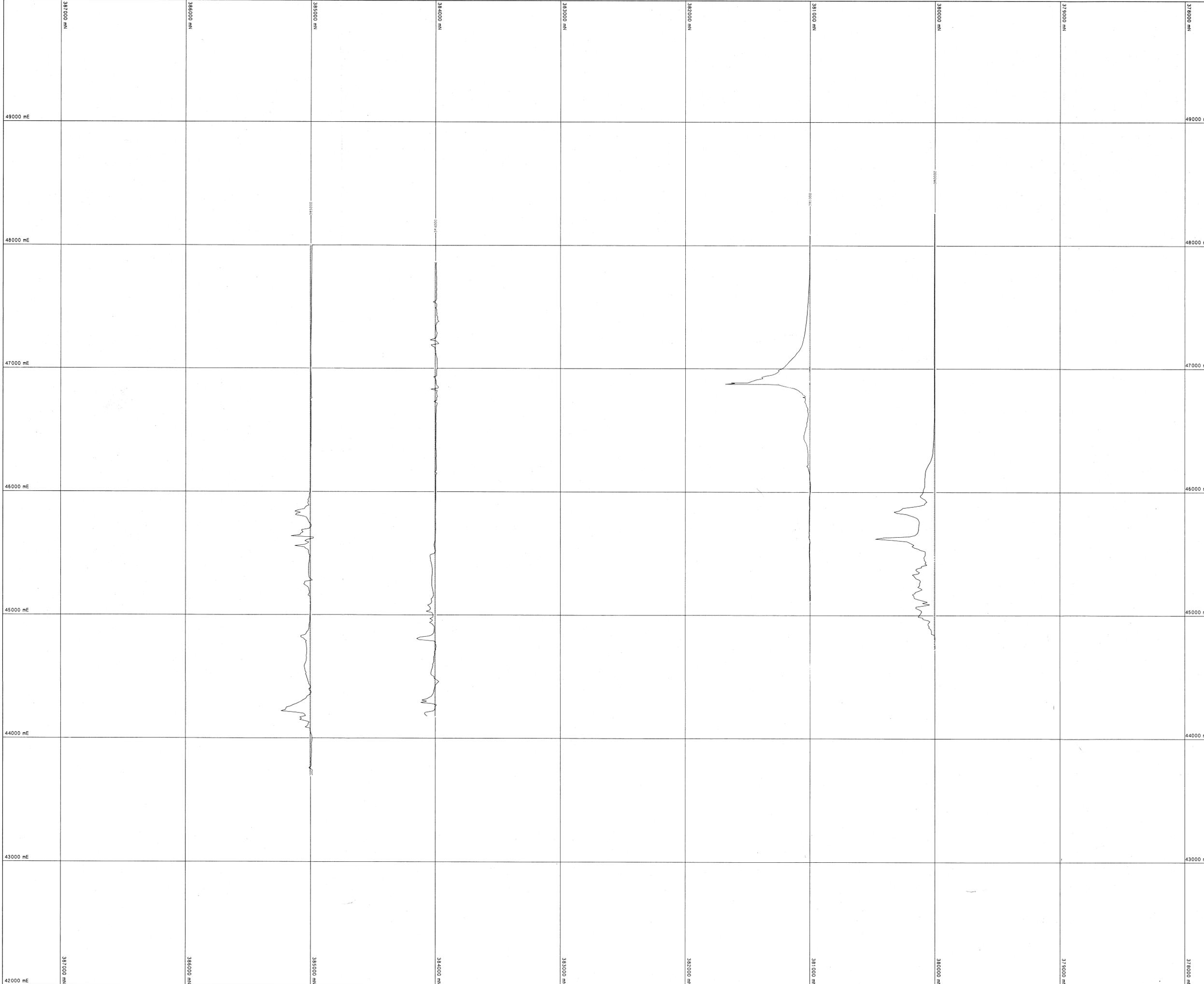
Fig. 12  
 ELECTROLYTIC ZINC CO. OF ASIA LTD.  
 PROJECT: ARTHUR LINEAMENT T.A.S.

87-2734  
 Vol 2/2  
 855093  
 GEOLOGY  
 (FACT)

Scale: 1:10,000  
 Survey: N.M.F.  
 Reference: Date: 20-4-'87  
 Drawn: N.W.D.S. Checked: Ref. No. AO-523-0027

6102

6102



SCALE



Fig. 13  
 ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED 855094  
 MINERAL RESOURCES DIVISION  
 PROJECT: ARTHUR LINEAMENT E.L. 22/85 ,TAS.  
 ARTHUR MAGNETICS  
 87-2734 Vol 212  
 1 cm = 1000 nT  
 6103

|           |                 |                |
|-----------|-----------------|----------------|
| Compiled: | Date: 24-APR-87 | Scale 1: 10000 |
| AMG:      | Latitude:       | Longitude:     |
| Drawn:    | File No:        | PLAN NO:       |

6103